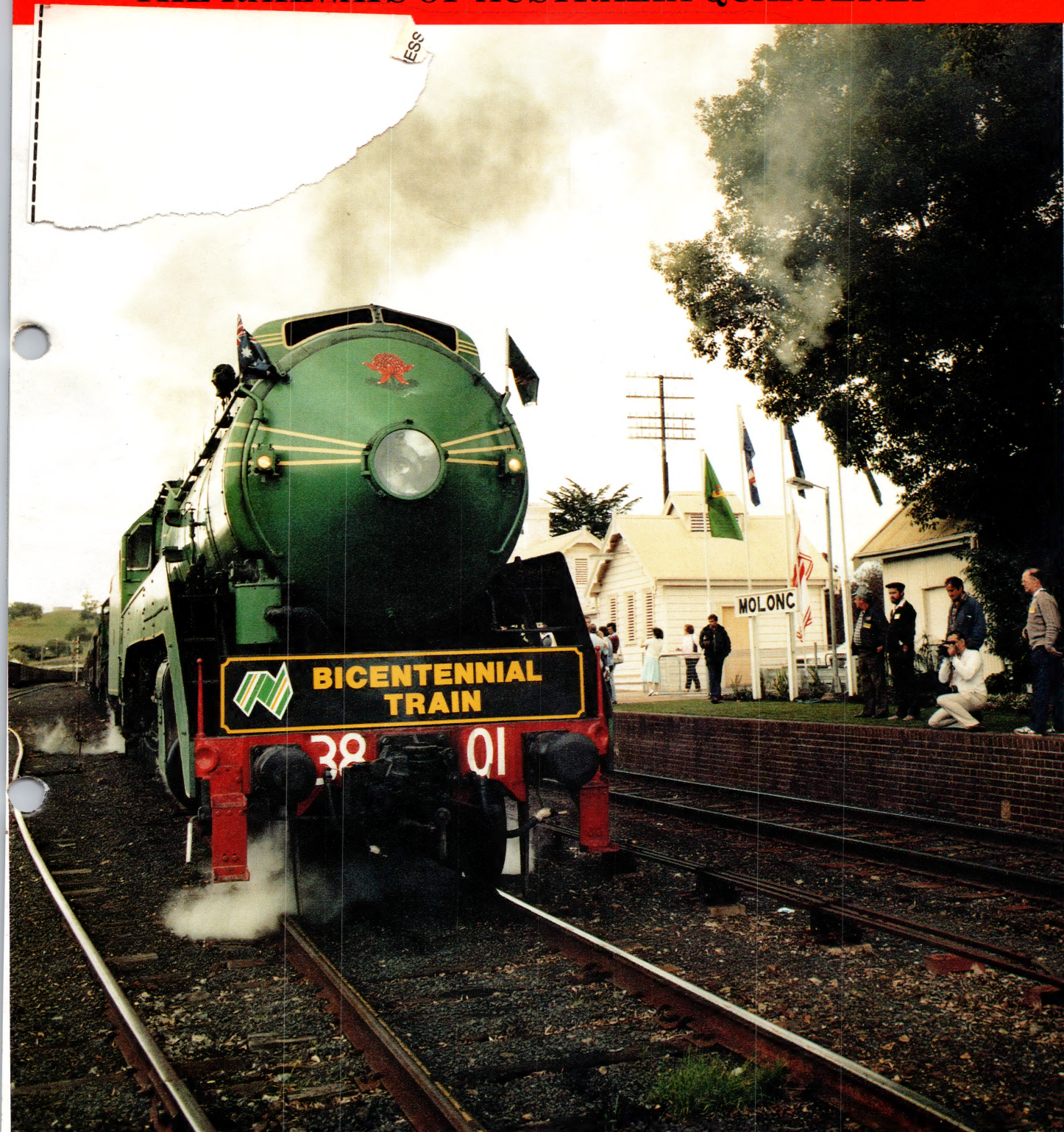


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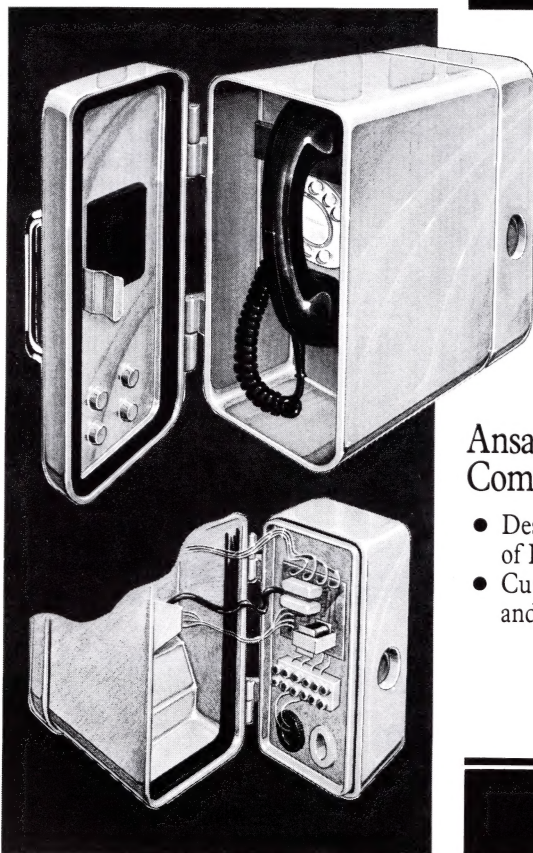
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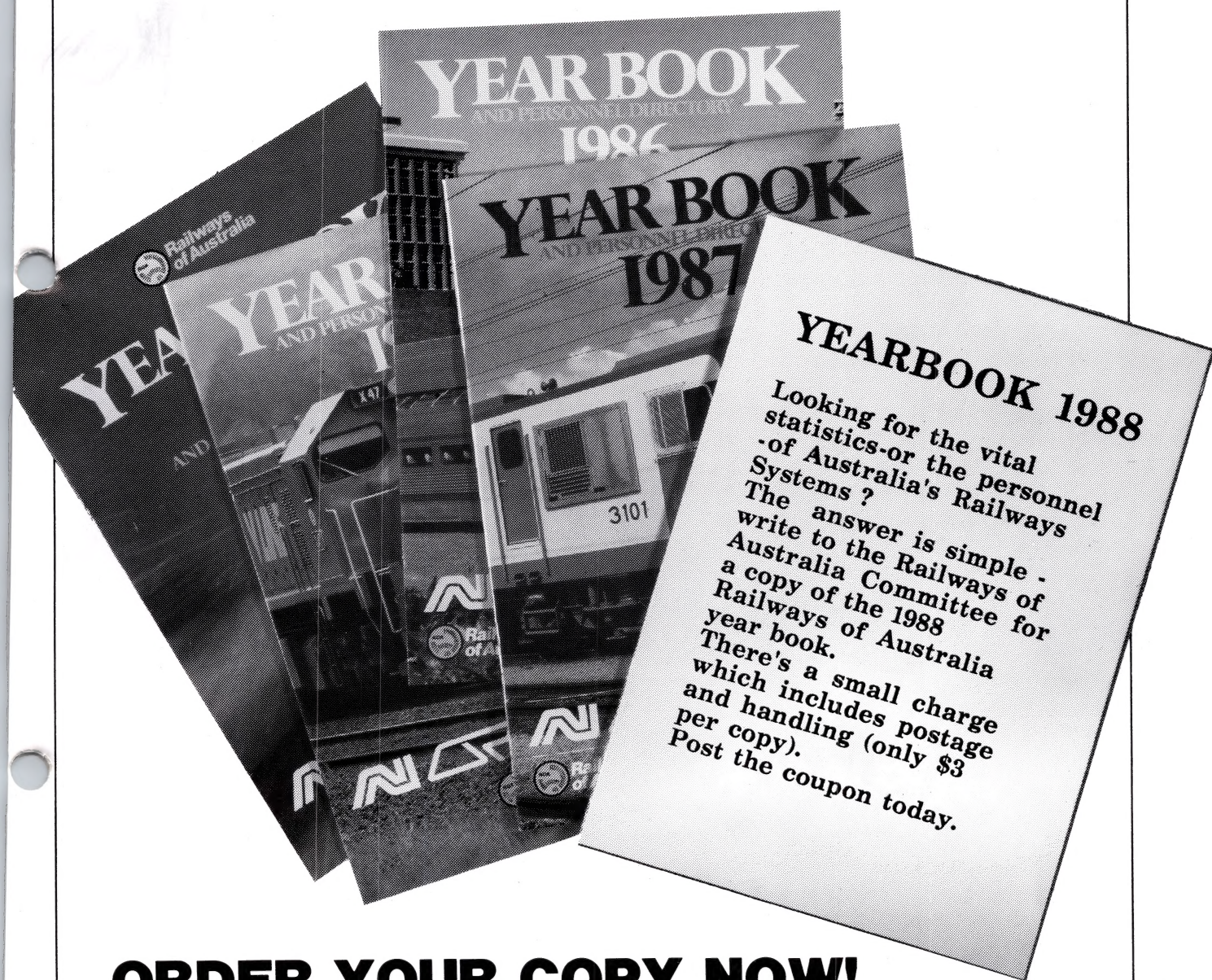
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Volume 25, Number 3
July, August, September 1988



Something to remember: father, son and locomotive 3801 at a country station on the way to Perth.

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Cover: Bicentennial Steam Tours' locomotive 3801 at Molong, New South Wales, on its journey from Sydney to Perth.

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Editor: Peter Temple

Advertising enquiries:
The Advertising Manager,
Railways of Australia
Network, 4th Floor, 85 Queen Street,
Melbourne, Vic. 3000.
Tel: (03) 608 0811. Telex: AA31109.

State representatives:
N.S.W.: Patrick Carr Pty Ltd, 1st Floor,
FAI Building, 185 Macquarie Street, Sydney,
N.S.W. 2000.
Tel. 232 1026, 232 8072

Qld: International Media Services, (Aust.),
P.O. Box 224, East Brisbane 4169.
Tel. (07) 393 0758

W.A.: Wilson's Editorial Services,
P.O. Box 40, Mirrabooka 6061
Tel. (09) 349 5798

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RIDING ON OUR HISTORY

M. C. G. SCHRADER

One of the functions of Network is to tell the story of Australia's railways to its reading public — with a strong emphasis on our modern techniques, the facilities we are developing, and the really good value we are able to offer to the travelling public and to our freight customers. Let me now, for a change, indulge in a little nostalgia.

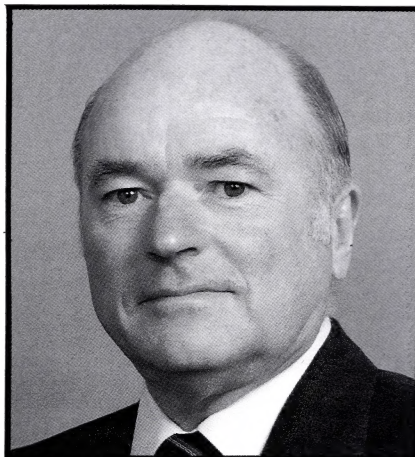
I have just returned from travelling with the Bicentennial Steam Train between Sydney and Perth. I represented the ROA Commissioners on this occasion, acting as their spokesman, and ensuring that the good work done by the working party set up to operate our Bicentennial Steam Train reached its fruition. There was enough goodwill from all areas of Australian rail to ensure that this presented no problem.

I have happy memories of the NSWGR 38-class in their regular work in days gone past. There were times when, on business or pleasure journeys between Sydney and Melbourne, I would deliberately ignore the then diesel-hauled Melbourne Limited Express from Sydney to Albury in favour of its Second Division, which was hauled by a 38-class in the run up to gauge standardisation in 1962. One would certainly be awake then until refreshments at Moss Vale, and the sight and the sound of the 38-class hard at work still lives in the memory.

These were rekindled by my recent experience. There were some memorable performances: 600 tonnes of train at 115 km/h on the plains west of Parkes; the same train being hauled in the still of the night air over long rising grades in the spinifex country near Hillgrange in South Australia, country totally unthought of for the 38-class when it was first conceived.

I also had the chance to watch engine crews at work on the footplate. It is in the handling of a heavy train that the essential teamwork between steam driver and steam fireman (surely not fireperson?) is demonstrated.

The task is seemingly endless: the need to watch the road ahead, the signals; the exchange of advice about water levels in the boiler; the turning on and off of injectors; the almost constant shovelling of coal into a hungry firebox.



These are the sights and sounds not seen by the average passenger, and they are produced by a breed of railwaymen whose skills will fade as steam locomotives vanish. (Australia's many preservation societies, of course, do keep these skills alive.)

I do not seek to minimise the very different skills required to handle trains hauled by electric or diesel-electric locomotives; the tonnages they handle are much greater, their speeds are generally higher, and the need for alertness is constant.

But today's skills are different skills. And the eagerness with which children of all ages cluster around the cab of a steam locomotive, guessing at the mysterious arts that the men on the footplate perform to keep a vibrant monster alive, is a tribute to its magic and romance, things that have been described by pens more skilled than mine in volumes published throughout the world.

I am glad that the Railways of Australia Commissioners decided, as their contribution to our country's Bicentennial, to operate 3801 to each mainland capital city.

I believe that its journeyings will give pleasure to many, recalling the vital part our rail network has played in Australia's history and the importance of the now superseded steam locomotive in that part.

TRACKS

NEWS FROM THE RAIL NETWORKS

QUEENSLAND'S **EXPO** YEAR **PUSH**

The next 12 months will be a time of great achievement for transport in Queensland, according to State Transport Minister Ivan Gibbs. The Transport Department and Queensland Railways will embark on a number of major projects and initiatives.

"These initiatives will result in significant improvements to the vast transport network which traverses Queensland," Mr Gibbs says. "This will bring major benefits to private motorists, rail travellers, and the transport industry as a whole."

The highlight of the period for Queensland Railways will be the completion of the \$360 million stage four of the Main Line Electrification program. This involves the electrification of 475km of track between Caboolture and Gladstone, the final section of the \$1090m MLE program that will link the vast Central Queensland coal fields with export ports and Brisbane.

Completion is due for May 1989, when a high-speed electric passenger service will begin between Brisbane and Rockhampton. The 120 km/h inter-urban trains will reduce travelling time between the two centres by 4½ hours to 9½ hours.



Special commissioning train opens the line from Caboolture to Nambour on 28 April 1988.

Rail travellers to destinations north of Rockhampton will also benefit from faster trip times with the rescheduling of long-distance passenger services using electric locomotives.

Queensland Railways introduced regular electric passenger services to the rapidly-growing Sunshine Coast on April 29.

The previous day, the Queensland Premier, Mr Mike Ahern, commissioned the 53km electrified link between Caboolture, on Brisbane's northern fringe, and Nambour, providing the 120000-plus

residents of the Sunshine Coast with a fast commuter link to Brisbane.

The new facility is an excellent way of reaching Expo 88. The new electric services cut travelling time between Brisbane and Nambour by up to 20 minutes to little more than an hour-and-a-half. A convenient late service from the Expo site arrives in Nambour just after midnight.

Patronage on the newly-electrified line is certain to increase as the Sunshine Coast becomes more popular as a residential dormitory to Brisbane. Suburban rollingstock is now being used on Brisbane-Nambour services, but high-speed intercity electric cars are being built by Walkers-Asea at Maryborough (Queensland) for use later this year. Next year, they will service Brisbane-Nambour-Rockhampton, a 639km journey. The cars will be capable of 120 km/h. The 20-car order for intercity services is worth \$30 million.

Brisbane-Rockhampton electrification next year will mark the completion of the billion dollar Main Line electrification scheme linking the Central Queensland coalfields,

Powerful Experience



A Queensland joint venture for the Main Line Electrification Project

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Since that time, Clyde has supplied over 1000 diesel electric locomotives to Australian Railways.

Walkers Limited has been involved in the design and construction of railway rolling stock since 1890. More recently they have supplied large numbers of diesel hydraulic locomotives and stainless steel EMU vehicles to Queensland Railways. A total of 280 EMU vehicles have been ordered so far, including the new inter-urban trains to run between Brisbane and Rockhampton by 1989.

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TRACKS



Special moment: Queensland Commissioner for Railways Ralph Sheedy (left), Queensland Finance Minister Brian Austin, Premier Mike Ahern, and Transport Minister Ivan Gibbs at the commissioning of the 53km electrified link between Caboolture on Brisbane's northern edge and Nambour on the Sunshine Coast.

NEW TOURIST SERVICES

their export ports, and Brisbane.

In the tourist area, Queensland Railways will make major improvements to two services, the Kuranda Tourist Train and the Daylight Rail Tours.

With the surge in patronage for the Kuranda service, extra trains will be provided during the peak season from April to October. The usual services will be maintained during the off-season.

During 1988, the running of six-day Daylight Rail Tours between Brisbane and Cairns, with overnight stops at Maryborough, Rockhampton, Mackay, Proserpine and Townsville, have been extended to operate from April to November.

Other Queensland Railways projects over the next 12 months include:

- A \$33m upgrading of rail facilities for the Cook Colliery, near

Blackwater, to increase coal tonnage. This includes provision of additional rollingstock and duplication of 17km of electrified track. The work will be completed by late 1989.

- The re-laying of track by the \$1m track laying machine to improve running times of trains over 44km between Bilyana and Cairns, 46km between Waitara and Hatfield, Central Queensland, and 35km between Warwick and Thane.
- Proposals to improve Mackay and Burdekin sugar traffic, Collinsville to Mount Isa coal traffic, and grain traffic throughout Queensland.

The Department of Transport's program over the next 12 months aims to provide more departmental services throughout the state's regional centres. Under the department's regionalisation program, in the past year facilities have been improved in Townsville, Mount Isa, Bundaberg, Cairns,

Gladstone, and Palm Beach on the Gold Coast.

In the next 12 months this program will extend to other centres throughout Queensland. Projects include:

- A new regional centre at Maroochydore including licensing, testing and inspection facilities. The complex will enable the department to take over drivers' licensing from police. Completion is expected early in 1989.
- A new regional centre at Cairns, ready early next year, including all licensing, testing and inspection facilities. It will house transport activities now conducted from two places.
- A new Regional Officer has already been appointed to the Maryborough area to improve facilities and services.
- Consolidation of Transport Department activities at one place in Mackay.



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APM, like the other major paper makers in Australia, is concerned with containing costs and increasing its market share. V/Line moves huge tonnages of pulp and paper each year for APM and is a vital part of the company's distribution of raw materials and finished products around Australia, as Andrew Kennon reports.

APM's factory at Maryvale near Morwell in the Latrobe Valley.



V/LINE HOT ON THE

APM's parent company, Amcor Limited, one of Australia's top 20 companies, is a market leader in the supply of pulp and paper, packaging, forestry, tissue and personal care products, international trading, transport, security and computer systems.

In 1986-87, APM produced 675 000 tonnes of pulp and paperboard at its six mills around Australia. APM Packaging converts manufactured paperboard into boxes for food, drinks and other domestic or industrial products at 19 factories.

APM's move into cardboard box making and the fine or white paper market is a result of a sales drive in all segments of the paper industry except newsprint.

Boxes and fine paper were once largely made by competitors or customers of APM, but the revolution in photocopying, computers and offset printing has opened up new markets for white

paper. Advances in packaging methods have also boosted the box market to around 650 000 tonnes this year.

At Maryvale in the Latrobe Valley near Morwell, APM has converted its number three machine from brown to white paper production with new machinery capable of making 70 000 tonnes or more a year.

APM now makes two-thirds of the paper and paperboard used by the packaging industry in Australia. It has also opened up new and expanding export markets for pulp and paper, especially in China.

Virgin pulp and recycled paper are the basis of all paper and paperboard products. APM produces long fibre ground wood pulp and shorter fibre pine and eucalyptus pulp for different types of paper and light board. Brown paper is made from unbleached pulp, whereas the white papers are made from bleached pulp and pine-rich waste paper.

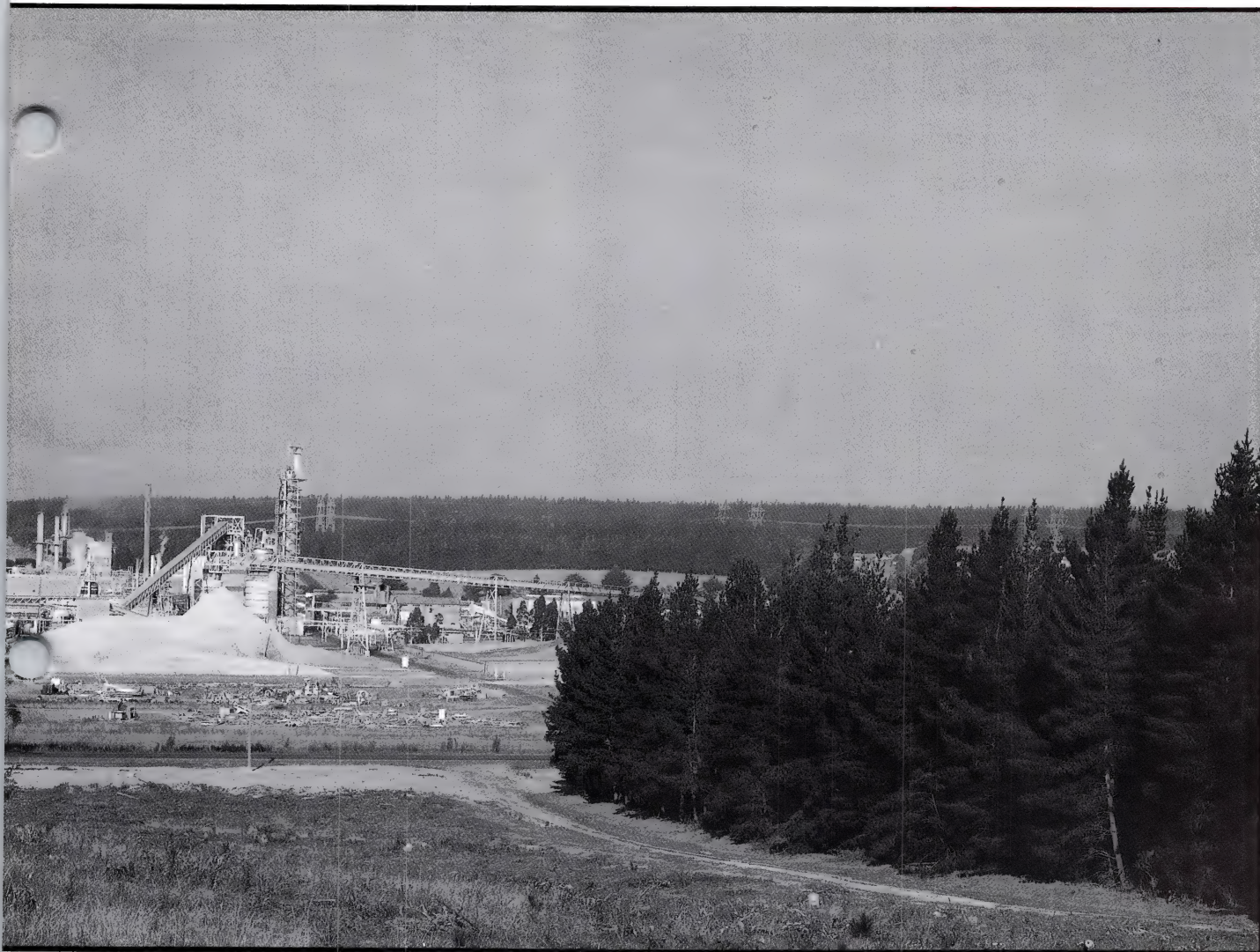
APM is almost self-sufficient in producing pulp for its paper mills, having planted more than 160 million trees on its 90 000 hectares of forests since the 1950s.

Recycled paper makes up about 50 per cent of APM's raw materials, or two-thirds of the 720 000 tonnes of paper and paperboard recycled in Australia in 1986-87.

V/Line moves more than 140 000 tonnes of pulp and paper a year from the Maryvale siding, of which 80 000 tonnes go direct to the metropolitan transit depot on a special train, six days a week.

The pulp is packed in bales or reels, depending on its moisture content and destination. The paper goes in reels.

APM has the use of two T class locomotives at Maryvale, which bring the loaded wagons and vans out to the siding from the mill and take returned rolling stock in for reloading.



PAPER TRAIL

In Melbourne, V/Line has spent nearly a million dollars on relocating APM's transit depot from the Montague Shed in South Melbourne to the Number Four Shed (Flinders Street) in the Melbourne railyards. It was a smooth changeover.

On the interstate runs, V/Line has block trains (trains with a set number of wagons) on regular schedules from Maryvale to Sydney, Brisbane, Adelaide and Perth.

The 1987 tonnage of paper product to the Chullora rail terminal in Sydney will be increased from 10 000 to 37 000 tonnes in 1988, due mainly to the bigger tonnage of pulp for the Botany mill.

The 15 000 tonne traffic of pulp for cartons to the Petrie mill in Brisbane is also likely to be increased.

In another new development, V/Line has recently begun moving approximately 20 000 tonnes of pulp from Cellulose Australia, an APM subsidiary, at

Snuggery near Mount Gambier in South Australia, to APM's Fairfield mill in Melbourne.

Kimberly-Clark has a big paper mill and plant at Millicent near Mount Gambier, close to the pine wood plantations.

V/Line moves thousands of tonnes of finished product from Millicent to Kimberly-Clark's private sidings at its Melbourne and Sydney warehouses and to the Brisbane rail terminal. Hard reels of tissue also go out on rail for transformation by paper converters to various brand-name tissue and sanitary products.

Freight forwarding companies send daily jumbo container loads of finished products interstate on rail to Sydney and Brisbane.

The Australian paper and paperboard industry faces an exciting future. Apart from increasing domestic demand, the industry will be taking advantage of opportunities in the Asian and Western Pacific regions.

Rising pulp prices on world markets will make Australian pulp and paper products more attractive if Australia can increase production using its own resources. Domestic capacity has not been keeping pace with demand, but this will change with increasing investment by companies like APM. The company is spending or planning to spend \$226 million on new plant and equipment.

There are opportunities for rail freight in these plans on the basis of delivering paper daily at the lowest overall cost, including handling costs.

V/Line is working with APM to review loading and unloading operations, improve transit times and make better, more productive use of its rolling stock of prairie wagons and flexi vans. The line is striving for a larger share of APM's pulp and paper by developing bigger and faster trains aimed at moving the product to the right places at the right time at competitive rates.

SR'S HIGH FLIERS BRING BIG SAVINGS

State Rail has taken delivery of the first of seven sets of overhead wiring track maintenance vehicles built for New South Wales rail system conditions that will dramatically streamline maintenance.

The other three-unit sets will be supplied at six-monthly intervals for a total cost of \$8 million. The last unit will be delivered before the end of 1991.

State Rail engineers drew up the specifications for the vehicles following studies overseas.

Plasser Australia did the detailed design of the vehicles in consultation with State Rail engineers.

The main vehicle has a driver's cab and seating for work staff and is capable of towing at speeds of up to 50 km/h. The main vehicle has three devices for work on overhead wiring, an elevator work platform, an extendable work "bucket" and a crane for supporting overhead wiring.

The support vehicle is smaller than the main vehicle and is designed to operate at up to 10 km/h under its own power at the work site. This vehicle is fitted with two devices — an elevator work platform and a hydraulic lifting device for supporting the overhead wiring.



The third vehicle is a drum wagon/ hydraulic winch to be used with one of the other vehicles when running out overhead wires. The two-cable drum trestles can be used as hydraulic winches or adjustable tension brake trestles, and the vehicle is also fitted with a heavy duty crane for loading and unloading

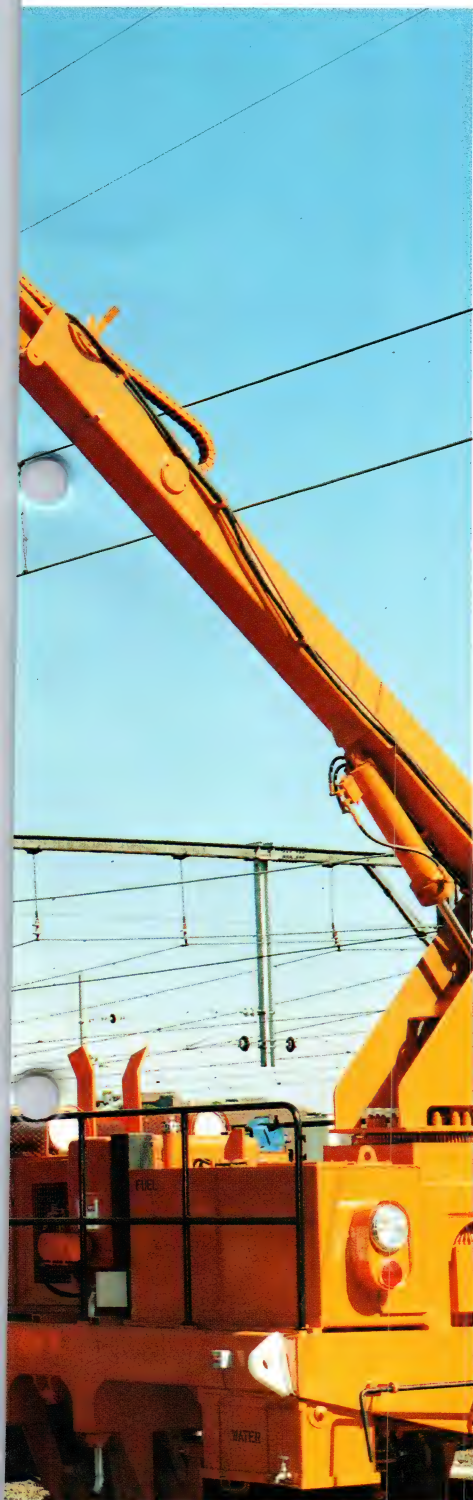
large cable drums.

The self-propelled three-unit sets can be coupled together for travel to work sites or they can work independently.

Locomotives and crews previously needed to operate the wiring trains will be free for revenue-earning duties.

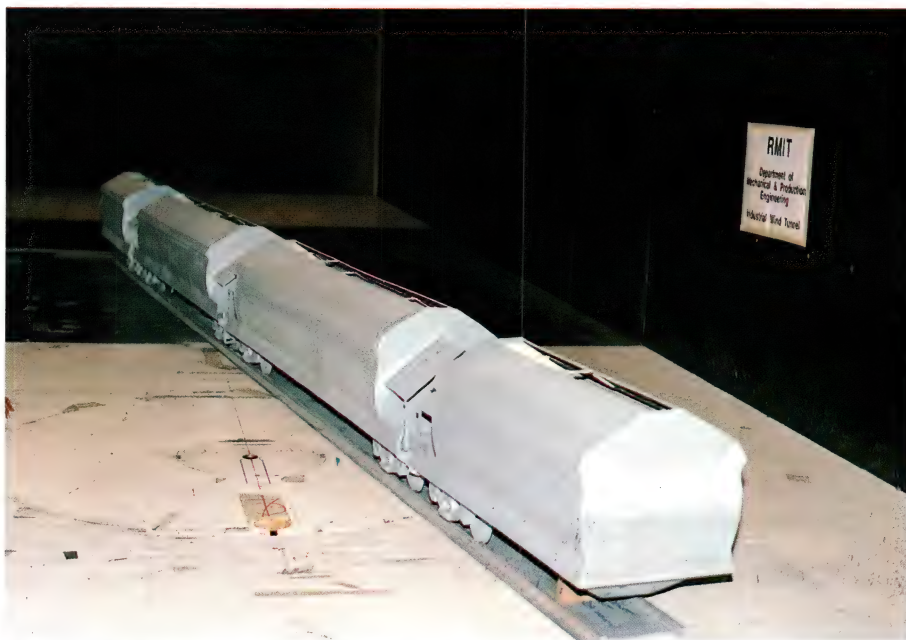
RISING FEELING

State Rail shows off the first of seven sets of new overhead wiring track maintenance vehicles built for its needs.



The vehicles will dramatically improve the productivity of overhead wiring construction and maintenance and increase safety for staff. A 30 per cent reduction in times for overhead maintenance will lessen the inconvenience to passengers and delays to freight services being hauled on electrified lines.

TRACKS



Model freight wagon being tested in a wind tunnel at the Royal Melbourne Institute of Technology.

IN SEARCH OF FASTER FREIGHT TRAINS

Railways of Australia, using a grant of \$80,131 from the National Energy Research, Design and Demonstration Council (NERDDC), is evaluating the aerodynamics of bulk freight vehicles.

The reason for testing bulk freight vehicles is that over 80 per cent of rail

traffic in Australia is bulk commodities hauled in unit trains.

The principal commodities shifted are coal (by far the biggest tonnage), wheat and other grains, and a variety of minerals and ores (for example, bauxite).

This traffic is the main user of fuel,

TABLE 1

Percentage breakdown of resistance with speed

Resistance	Percentage		
	30 km/h	60 km/h	90 km/h
Wheel/rail contact	6	11	18
Track	8	9	8
Bearing	58	33	19
Rolling	10	6	3
Aerodynamics	18	41	52



Mr S. Watkins of the Royal Institute of Technology demonstrates computer analysis of drag co-efficients to the Technology Development and Application Committee.

and with the combined fuel bill of Australian railway Systems above \$250 million dollars a year, effective fuel management is a priority.

Excluding the effects of grades and curves, the resistance to train movement can be expressed by the formula:

$$R = A + BV + CV^2$$

where

R = total rolling resistance

V = speed, and

A, B, C = co-efficients relating to various losses including bearings, wheel/rail contact, and aerodynamics.

The CV^2 term is the aerodynamic component and **C** is a drag co-efficient.

As the energy loss due to aerodynamics varies with the speed squared, aerodynamic studies have generally concentrated on high speed trains. For instance, special attention was given to aerodynamics in the TGV design.

With bulk commodity vehicles, however, a large percentage of the energy loss is still due to aerodynamic drag in the speed range 60 km/h to 90 km/h, which is typical of current operating speeds.

Making real vehicles for service tests is expensive. ROA has therefore arranged wind tunnel testing with scale models at the Royal Melbourne Institute of Technology.

The model is to one-tenth scale. Upstream to the main test model are one-and-a-half dummy vehicles, while an additional vehicle is downstream. These additional vehicles ensure that the test model aerodynamics are similar to a single vehicle in a long unit train.

To visualize the air flow in the wind tunnel either helium bubbles, smoke or wool tufts are used. These techniques are particularly useful in initial examinations of design improvements

as they provide an understanding of air movements.

For the calculation of energy savings and to provide a quantitative measure of aerodynamic performance, drag co-efficients are calculated.

In practice, drag co-efficients are dependent on wind direction and speed. To account for this the track can be rotated (yawed) and measurements taken at different yaw angles.

A wide range of aerodynamic improvements have been assessed and drag reductions of up to 40 per cent recorded.

The testing is still underway and rail Systems are beginning to examine cost-effective design modifications.

TABLE 2

Test configuration	Drag co-efficient	% Reduction
Baseline vehicle (empty)	0.44	
+ loaded to high level	0.31	31%
+ with flat top	0.30	32%
+ with longitudinal doors	0.38	14%
+ with enclosed top and end variation	0.26	41%

TRACKS

V/LINE FREIGHT RUNS LEAN

V/LINE FREIGHT IS COUNTING ON A GROWTH IN FREIGHT TONNAGE OF 20 PER CENT TO 1992-93. CONTAINER FREIGHT SHOULD INCREASE BY 6 PER CENT A YEAR. ANDREW KENNON LOOKS AT V/LINE'S FREIGHT PERFORMANCE AND PROSPECTS.

Last year, V/Line moved 10.5 million tonnes of freight. That figure is expected to increase to 12.7 million tonnes by 1992, while total container freight volume is forecast to rise from 2.8 to 3.8 million tonnes in the same time.

These impressive statistics show that V/Line does indeed mean business.

Since 1986, reductions in the workforce, following manpower reviews and reorganisation, and widespread structural, technological and operational changes, have produced falling operating costs and successive deficit reductions.

Freight operating costs are expected to fall from \$324 million in 1986-87 to \$278 million in 1989-90. At the same time, V/Line's freight services deficit will fall from \$146 million to \$101 million on current estimates, as Table 1 shows.

Since the formation of V/Line in 1983, around \$650 million has been spent on capital improvements — on new locomotives and rolling stock, new trackwork, maintenance facilities, signalling and safe working equipment, buildings and other amenities.

Total annual investment peaked at \$176.7 million in 1984-85 (in December 1987 dollars) and has since been reduced to much lower

levels. In the next five years, investment on capital improvements is expected to be around \$264 million (in December 1987 dollars).

Since 1983, V/Line has brought in:

- block train running of all interstate and heavy freight services inside Victoria;
- two-man crewing of freight trains;
- a complete change in train running operations, with the near-elimination of shunting and marshalling of block trains in transit;

- the phasing out of all four-wheel wagons;
- a major upgrading of the grain network with new tracks, sidings and crossing loops.

By 1990, V/Line will have reduced its wagon fleet from 9 000 to 5 000 and its grain wagon fleet from 1 265 wagons in service to 700.

The locomotive fleet of 264 will be reduced to 216.

In the four financial years 1983-84 to 1986-87, one-third of V/Line's capital expenditure has been on new locomotives, carriages, and freight wagons. V/Line rebuilt 24 locomotives and began the program of acquiring 25 new N class passenger and 33 G class freight locomotives.

Most of the older and smaller locomotives (mainly the S, B, L and T classes) have been or will be phased out because of their high operating and maintenance costs, and because they do not suit future traffic tasks and operating requirements.

The \$140 million V/Line program of investment in the grain network is almost complete. The inefficient grain handling and transport network of the 1970s has been radically upgraded on three fronts.

THE
LARGELY
UNPLANNED
OLD GRAIN
NETWORK
HAS BEEN
TRANS-
FORMED
INTO A
SYSTEM FOR
THE FUTURE.



TABLE 1
Key indicators of change

	1986	1987	1990
People (30 June)	13430	11700	9400
Wagons (revenue earning)	10650	9000	5000
Freight tonnage (millions)	10.5	10.5	11.4
Freight operating costs (Dec 86\$)	\$361M	\$324M	\$278M
Total freight deficit (Dec 86\$)	\$165M	\$146M	\$101M
Average age locomotives (years)	19	16	10
Freight and passenger revenue per employee (\$000s)	16.7	19.8	33.6
Fast track performance (% next day)	50%	91%	95%
Superfreighter slots (weekly)	200	800	1600

First, the grain freight locomotive fleet has been rationalised with the acquisition of 25 new high-powered, fuel-efficient G class locomotives.

Second, the grain freight wagon fleet has been reorganised on the basis of 700 bogie wagons. In 1981, there were 5 437 wagons, mainly four-wheelers, which had a low productivity.

Third, the main grain lines have been upgraded with easier gradients, longer crossing loops and longer sidings at many central receival points (CRPs). A number of light lines have been upgraded to take the longer, heavier grain trains.

The new grain network has been designed for the industry's needs with the potential to move four million tonnes a year. V/Line has continued to cut unit costs, and the grain system is now 20 per cent more efficient than it was in 1980.



by 1992 with a minimal increase in rolling stock.

The interstate corridors, particularly Melbourne-Sydney, have a large potential for development through increased market share. Apart from buying heavy haul locomotives, the main investment will be on the development of intermodal traffic, including wagon conversion and mobile handling equipment at South Dynon terminal, now undergoing a major redevelopment.

V/Line plans to increase the capabilities of its container wagon fleet to take advantage of marketing opportunities. Several bogie designs will be tested, the best being fitted to the existing wagons for high-speed running on the Melbourne-Sydney corridor.

To improve the use of existing container wagons, a small number of new low-tare, low-profile wagons could be built to accept the increasing diversity of box sizes.

The thrust of V/Line's corporate strategy is towards meeting cost recovery targets through better use of resources and the expansion of market share through providing better services.

A major part of the push for more efficiency is the introduction of new financial, accounting, business and information systems.

Over the last three years, V/Line has developed computerised information and business systems, spending \$6 million a year on computers and the employment of 100 staff.

V/Line claims that the key to lower grain rates lies in making the best use of capital assets, assets that will not need updating for at least another 25 years.

The largely unplanned old grain network has been transformed into a system for the future, a system that will keep down costs, with savings for growers, well into the next century.

Table 2 summarises changes in grain support operations between 1981 and post-1988.

With the investment in grain wagons completed, V/Line is now improving the usage of haulage capacity, allowing it to carry an extra two million tonnes

Brisbane Superfreighter outward bound at twilight through Melbourne's western suburbs.

TABLE 2
Changes in grain transport

	1981 (31/12/81)	POST 1988
Number of wagons	5437	700
Number of locomotives	77	33
Number of destinations (mills and ports)	18	10
Largest train size (bogie wagons)	22 VHGYs	55 VHGYs
Crew size	3 man	2 man
Use of sub-terminals	extensive	nil
Cartage by 22 tonne wagons	48.2%	0%
Cartage in 55 tonne bogie wagons	51.8%	100%
Use of brakevans on grain trains	compulsory	abolished
Use of road to complement	occasionally	extensive

“
BEFORE
I go, I'd like
to see
Victoria's
public
transport
system become
the pride of
its workers
and not just
a job.
”

**John King, Victoria's
new Director-General
of transport**

RAIL FAN IN THE

John Berresford King, 51, Victoria's new Director-General of Transport, is a man who genuinely likes trains. He is a member of several rail enthusiast groups. He is also a man who graduated as a lawyer from Melbourne University at the tender age of 20 — too young to practice law.

He had matriculated with honours and gone to university when he was 16.

“Ours was the sort of family that placed a high value on education, so it was never a question of whether I would go on to university — the only question was what course I would do there,” Mr King said.

“I take the same attitude with my own children, as a matter of fact.

“One day towards the end of my secondary schooling, the family sat down together and went through the Melbourne University calendar examining the courses available.

“Dad had two engineering degrees, and neither of us wanted me to do engineering to join the family engineering business, Martin and King.

“By the way, the company built the Harris trains and the old ‘square-wheeled’ rail motors for the railways. I used to work there during my school holidays.

“Anyway, as it turned out, the only course no-one had any objections to was law. So I did law. Fortunately I thoroughly enjoyed it.”

Because the young John King was only 20, as a minor he couldn't start to practice as a lawyer, and Professor Zelman Cowen, then dean of the law school, advised him to go to Harvard in the USA. (Sir Zelman later became Australia's Governor-General.)

“He organised for me to do the entry exam, which I passed, and so,

as a very young and green foreigner, I started at the Harvard Business School in Boston.” He graduated from Harvard with majors in marketing and strategic planning, and a master's degree in business administration.

“We foreign students were luckier than the locals in one way — the last sixth of our course could be spent at another institution,” said Mr King. “I did my last bit at the Massachusetts Institute of Technology, learning about computers.

“That was in 1959, so I was there finding out about the ‘new technology’ in its very early pre-transistor days. I found the training handy later on, when I was reorganising state government departments.”

After he graduated from Harvard, Mr King began work for Volkswagen in the US. He transferred to VW headquarters in Germany, and continued working for the company when he returned to Australia.

In 1964, he was invited to help establish the Graduate School of Business Administration at Melbourne University. “And that's where I stayed for the next 17 years,” he said. He became chairman of the school and deputy dean of the economics and commerce faculty in the late 1970s.

“John Elliott was one of my students — he's become quite well known,” said Mr King. Another was David White, Victoria's Minister for Health.

During these “pre-government” years, Mr King was a director of several companies, including Adidas, Vulcan, and Pak-Pacific. He also found time to lecture on marketing at universities in Japan and England.

“Lecturing the Japanese on marketing sounds like taking coals to

TRANSPORT CAB



Newcastle these days, doesn't it?" he said. "I found it very different to lecturing here or in England. For a start the students are utterly quiet — not a sound out of them unless you ask a question.

"And they never question you. At one time I even tried to get a response by throwing in a couple of outrageous statements, but their respect is such that they just wrote down what I said. Of course I then set them straight."

John King was appointed to the Board of Works board in 1979, and became principal management consultant to the State Public Service Board in 1981. The next year he began working on the public transport reorganisation report for the then Transport Minister, Rob McLellan.

Labor took over in 1983, and the new Minister, Steve Crabb, asked Mr King to stay on to lead the project team through the restructuring of VicRail into V/Line and The Met.

He went on to become Acting Director of Consumer Affairs, reorganising the Ministry. He became Commissioner for Corporate Affairs, and was then Secretary to the Attorney-General's Department under Jim Kennan before joining the STA.

"I can see this as my last stop," said Mr King. "But before I go, I'd like to see Victoria's public transport system become the pride of its workers, not just a job.

"Then I'd like to retire."

Mr King and his wife Jill, a lecturer in social work, have 50 acres in the Dandenongs where they want to relax in a few years' time, and where they will grow and market camellias.

"I'm very keen on gardening . . . and trains," he said. "I'm pretty familiar with most Victorian lines, which of course is a help in this job."

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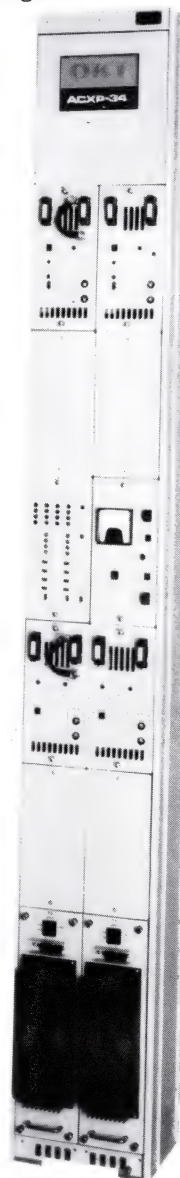
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PLESSEY

PLTOO 24

EXPO'S RAIL BONANZA

QR EXPECTS TO CARRY 12m PASSENGERS

Queensland Railways expects to carry 12 million passengers to and from World Expo 88 in one of Australia's biggest transport operations.

Expo 88 is being staged on the South Bank of the Brisbane River, near the Queensland capital's central business district. It is served by two suburban stations — South Brisbane-Expo and Vulture Street-Expo — both providing direct access to the 40ha site.

Early passenger figures indicate

that Queensland Railways is exceeding pre-Expo estimates of 45 per cent of all Expo journeys with a share of more than 50 per cent.

An extra 700 trains a week have been scheduled to service the Expo site. On weekdays after 8 am 232 services run to and from the exhibition. On weekends fewer run.

Because of the huge public demand, an average of 10 special trains daily were needed to clear crowds at peak periods during the six days of Expo.

Expo passengers are being

conveyed by electric trains on the Cleveland, Beenleigh, Ipswich, Ferny Grove, Shorncliffe, Doomben, Caboolture, and Nambour corridors.

About 12000 free parking spaces are available at stations to ensure easy access to the electric train service to Expo. Rail, the most important means of transport, is being complemented by Brisbane City Council buses, coaches, ferries and taxis.

Only about 17 per cent of visitors to Expo are expected to arrive by private car.



Passengers stream out of Brisbane's Vulture Street Expo Station on their way to the exposition. Only 17 per cent of visitors are expected to arrive by private car.

V/LINE'S
EXPERTS
COMBINE
NEWEST
TECHNOLOGY
AND
EXPERIENCE
TO PRODUCE

THE DRIVING MACHINE

A new V/Line driver training program to be introduced in 1989 will use a locomotive simulator in an all-new course using computer-based training combined with intensive on-the-job instruction and practical training.

V/Line's Priority Projects Group Manager, Frank Wagner, says that although the design and content of the course have been based on the requirements of V/Line's operations, the course can be adjusted to suit any system with freight and passenger operations, including training for heavy haul train crews.

The two-year course will provide the trainee with the knowledge and experience usually gained from enginemen with 20 to 30 years' experience. It combines practical experience with simulator training to take learner drivers through the complete range of situations that can arise in traffic.

Frank Wagner has a strong personal interest in the project. He developed the idea and preliminary design, drawing heavily on his experience in project resource management and development.

He says the program will help to develop skills and performance under carefully controlled conditions.

"It also helps assess the information now available on the technology and the in-train forces developed in heavy-haul railroads," he says.

ENGINEMEN. Under the guidance of Project Manager Colin Oates, the project has been developed in co-operation with V/Line's enginemen and their union executive.

Colin came to V/Line a year ago from the Royal Australian Air Force, where he worked on designing computer-based training for

NO
other system in
the world uses
the newest
technology in
locomotive
simulators with
an integrated
on-the-job
training
program.



View from the loco: A mock-up of the ACET locomotive simulator seen at the Perth railway engineering conference in 1987.

Three of the key people in V/Line's driver training project (from left), Warren Winton, AFULE consultant, Frank Wagner and Colin Oates, discuss the features of a G class locomotive cab.



Want to know more about Australian Railways?



The XPT (Express Passenger Train) just south of Goulburn, N.S.W.

V/Line blue metal train at Kilmore East.



Q.R. General freight train, Rockland.

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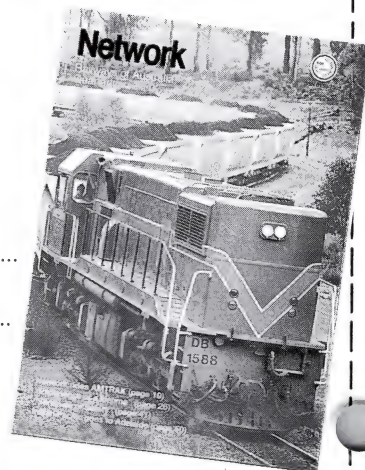
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the F-18 Hornet. He did research on science education methods as a lecturer at Monash University, and says computer-based driver training means that one program can be used across the state.

Frank Wagner believes that manpower planning is vital. "This program complements other manpower projects at V/Line," he says.

The Canac review of light lines, the corridor rostering review, the two-man crewing project, and the shunting operations review, in conjunction with the driver training project, have meant a reduction in the number of crews, increases in the tonnage of trains, and increased train mileage.

"There will be a saving of several millions of dollars of operating expenditure," says Frank Wagner.

The new project has six stages, and uses a locomotive simulator, thereby reducing the time taken to train a driver from four-and-a-half to two years.

Frank Wagner says the project has great commercial potential, particularly in developing countries where railways are being upgraded.

"It's here that knowledge of the management of in-train forces will be required by engine crews in a system that runs trains of various lengths and tonnages in both freight and passenger services," he says.

NEWEST. Frank Wagner says he knows of no other system in the world that uses the newest technology in locomotive simulators with an integrated on-the-job training program.

The Australian Federated Union of Locomotive Enginemen was invited to monitor the progress of the project from the start as part of the project team. It has contributed a great deal of information.

This co-operation has been essential to the success of the project. Drivers with knowledge of other rail systems have been able to contribute information and, as a result, the project team is a highly skilled and multi-disciplined group.

Although the training course will be shorter than its predecessor, driver error is expected to be reduced through constant monitoring and follow-up of drivers after they qualify.

The simulator does not move, mainly because the project team concluded that motion might give the trainee the wrong cues for reaction.

Frank Wagner says he reviewed other training systems and found that in most cases the traditional approach was still in force.

"The emphasis was still on training drivers in theory and practice on the mechanical and



electrical componentry of the locomotive, with little regard for train-handling techniques and on-the-job training," he says.

STAGES. Under V/Line's new driving training program, the trainee goes through an introductory process, followed by a second stage in general development of railway practices. Stage three involves theoretical and practical instruction.

The locomotive simulator will develop skills in controlling train dynamics and enable a trainee to handle any track or corridor. Road trips under the supervision of a Senior Road Foreman will assess whether the trainee is ready to progress.

More on-the-job and computer-based training is required before final assessment.

A review and examination will cover the two years' training, and the driver's performance will continue to be monitored by the locomotive logger in conjunction with the simulator.

Training covers operating strategies for all corridors and the main types of trains using them. Readouts from logging equipment will identify errors or unscheduled events.

The training program, complete with simulator, computer-based lesson plans and supplementary information, as well as the logging equipment, will be ready in July 1989.

Inquiries can be directed by Mr Frank Wagner, Group Manager, Priority Projects, State Transport Authority, 589 Collins Street, Melbourne, 3000. Telephone (03) 619 2612.

ACET locomotive simulator enables driver trainees to prepare themselves for the real thing, dramatically shortening training time.

The locomotive simulator will develop skills in controlling trains to enable a trainee to handle any track or corridor.



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THE 3801 RUN

THE LEGENDARY 3801
HAS MADE ITS MOST
AMBITIOUS TRIP FOR
1988. M.C.G. SCHRADER
WENT ON THE JOURNEY



There was an air of expectation as the Railways of Australia Bicentennial Steam Train, hauled by the legendary 3801, stood ready for the first of its series of intercapital trips on Sunday 13 March.

With a trailing load of almost 600 tonnes (six sitting carriages, lounge car, buffet car, crew sleeping/kitchen car, spare parts vans, and water gins), 3801 was timed to leave Sydney's Terminal at 7.30 a.m. The train was close to full with 350 passengers and there was a crowd of well-wishers to farewell the locomotive.

On the one-day journey, the full consist was not really needed — but the excursion was a shakedown for the longest of the 1988 tours. And minor problems did reveal themselves, particularly a tendency for the brakes to release too slowly.

The weather for the day was kind, albeit with a cool wind once the Southern Highlands were reached. At Campbelltown, 36-class 4-6-0 3642 (preserved and maintained by the New South Wales Rail Transport Museum at Thirlmere) came on to assist the 38-class with the heavy grades ahead. Both locomotives performed their tasks well, and the sights and sounds were a delight to the railway enthusiast's ear.

While the locomotives were serviced at Goulburn, the local Lions Club provided a light platform lunch of steak sandwiches and drinks for all passengers.

In regular service, the 38-class locomotives never worked to Canberra. There are some extremely tight tunnels on the steeply graded line between Goulburn and Queanbeyan. For this reason, on the steepest section between Bungendore and Farrer, State Rail arranged for assistance from an 81-class diesel-electric locomotive painted in Bicentennial colours. The three locomotives staged a runpast for photographers.

The approaches to Canberra and Canberra railway station were thronged with people to watch the arrival of the Bicentennial Train late in the afternoon.

AMBITIOUS. By far the most ambitious of the ROA Bicentennial Steam Tours for 1988 began on Wednesday 27 April. On that day, years of planning by railway staff from three Systems and by the members and staff of 3801 Limited, which leases the locomotive from State Rail, came to fruition.

Flagged away by Mr Pat Johnson, then Chief Executive of State Rail, 3801 began the long westward trek from Sydney to Perth, a journey it had done once before — in 1970. That journey commemorated the final link in the East-West standard gauge network established two years earlier.

Now 3801, again assisted by 3642, left Sydney Terminal's No 3 platform at the head of the full train just as the early sunshine

ON

**Wednesday 27
April years
of planning
by railway staff
of three systems
and by members
and staff of
3801 Limited
finally came
to fruition.**



was beginning to be dimmed by cloud.

When they approved of the Bicentennial Steam Tours idea, the Railways of Australia Commissioners wanted as many Australians as possible to ride on the train during its visits to the capital cities. For this reason, only sitting carriages were taken on the way to the West. Even if enough restored non-air-conditioned sleeping cars had been available for the trip, their usefulness as sitting carriages is limited. The East-West trip was therefore based on overnight stays and the provision of an air-conditioned sleeping car consist between Port Augusta and Kalgoorlie over the Nullarbor Plain. On this section, too, meals were taken in the dining car, setting an upper limit of 144 to first class (or Group 1) passengers. Other passengers were offered the choice, at a reduced fare, of bringing their own bedding and eating meals in a buffet car on the



desert section.

Quickly gathering speed on the raceway between Redfern and Burwood, 3801 paused at Strathfield to pick up passengers, and at Penrith to take water and attach an assisting electric locomotive for the severe gradients over the Blue Mountains.

Just beyond Lawson, on the 1-in-33 grade, the train came to a stand. Special precautions were taken to ensure that the up track was clear of traffic as passengers crossed under supervision to take up positions in a photo line for the first of many runpasts staged on the journey to the West. The three locomotives, all working hard (though only the steam locomotives showed it), came past to the furious click of camera shutters and the whirring of video recorders. If anyone made a profit out of the journey, it was surely film and videotape manufacturers.

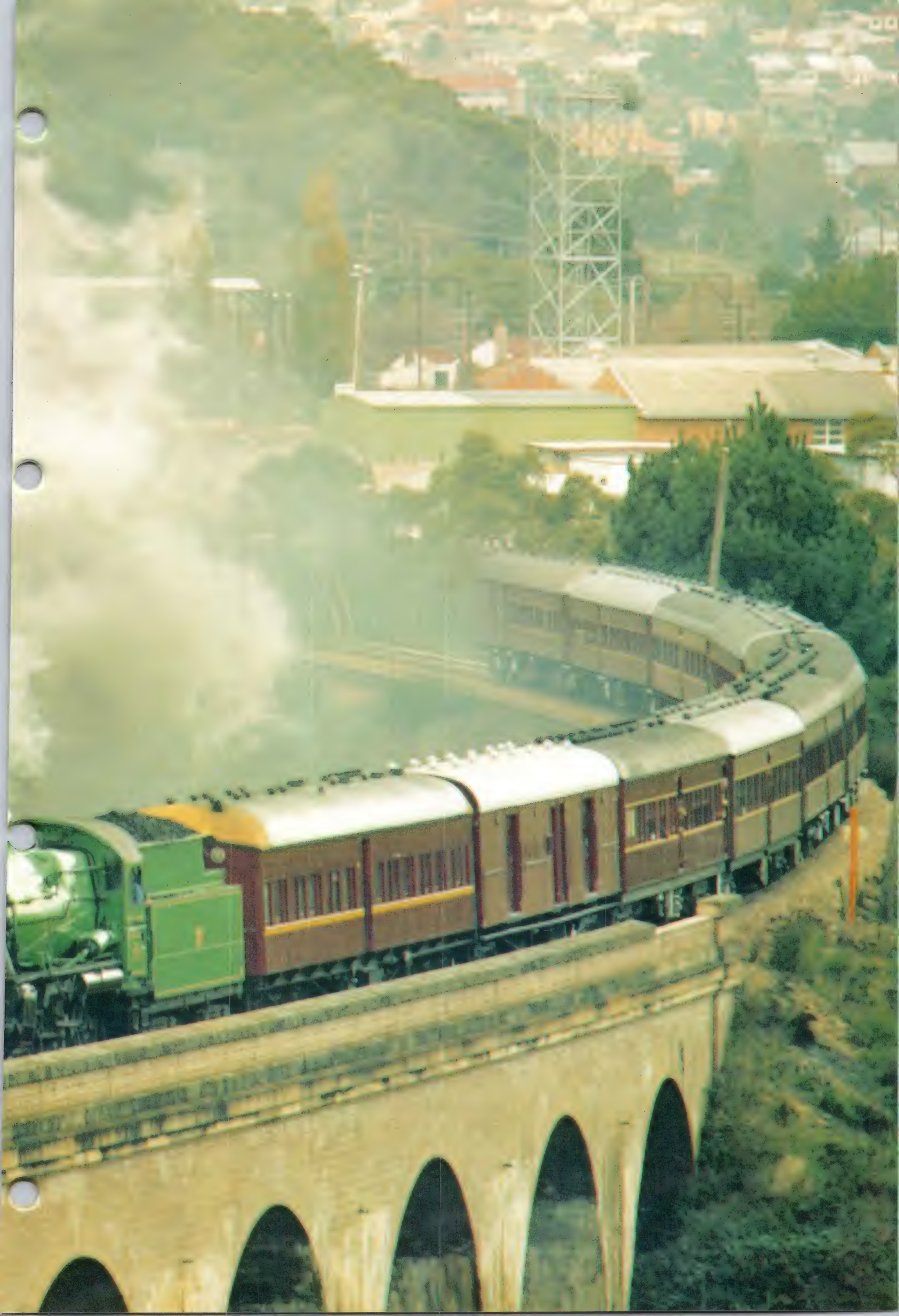
The train then climbed to the crest of the grade at Katoomba and coasted along to Blackheath, where passengers detrained for lunch. This was provided in the Community Hall next to the station, with catering by the New Ivanhoe Hotel. There was no rush but so efficient was the service that passengers had plenty of time to join a following double-deck interurban train for Mt Victoria. The back-up buses ordered from Katoomba in case things ran late were not needed.

TUNNELS. And so down the fourteen tunnels, past the famous Lithgow ZigZag, with a pause at Lithgow Station, and on through Wallerawang to Bathurst for the night. A fleet of coaches took passengers to their hotel and motel accommodation, while the locomotive inspectors supervised the stowing of 3801 and its preparation for the following day.

Bicentennial Steam Train hauled by locomotive 3801 and 36 class 3642 near Lithgow in New South Wales on the journey from Sydney to Perth.

Overleaf. Over the viaduct: Steam locomotives 3801 and 3642 make a magnificent sight in the early stages of the marathon journey.





The first day ended with a civic reception attended by the deputy mayor of Bathurst in the Leagues Club. Dinner was served to the 175 tourists, and coaches took them back to their hotels.

As the train progressed westwards, it seemed that loco preparation was the bugbear. At almost all points, the familiar skills once so much part of train operation were found to have faded. More time was needed than had been allowed. This meant the Thursday departure from Bathurst was delayed a little, and once this happens on busy tracks, it is difficult to regain the train's place in the schedule.

After Bathurst, the first major stop was at Blayney, where a large crowd had gathered. In a most imaginative, carefully thought-out, and well-executed theatrical interlude, a group of local ruffians, having had the train stopped, proceeded to kidnap a "local dignitary" travelling on the train with his ladies and to bail them up in the station yard. The local landowner, however, proved to be a man of spirit. After some 20 minutes, good triumphed over evil, most of the bandits lay dead, and the train was free to resume its journey.

The incident was staged by students from the local high school. We understand that this is not the first occasion on which they have done something like this, and their enthusiasm, professionalism, and humour were quite evident.

At Orange passengers toured the city and surrounding district by coach. A picnic lunch was provided on the shores of Lake Canobolas and passengers rejoined the train at Borenore.

Later, at Molong, the Bicentennial Steam Train met another famous Australian train, which gets even better known as it gets older — the Silver City Comet, the first fully air-conditioned train in the British Empire. It has been described as a 1937 model XPT (the concept is the same).

ENTERTAINED. The rain that had threatened all the afternoon finally descended at Parkes. It was welcome for the locals following a dry period but something of a shame for the BST passengers. Still, the rain did not deter welcoming crowds, and the town's leading citizens were entertained in the lounge car by ROA personnel. Wyndham Estate wines provided the accompaniment to the nibbles.

From their hotels and motels, passengers went on to the Parkes Citizens' Club for an excellent meal, followed by an excerpt from Hitz from the Blitz, a review by the Parkes Amateur Dramatic and Operatic Society. It seemed that many of the passengers knew the songs and recognised the setting, and the show was well received.

Passengers had been told that Friday

29 April was to be a long day, and that's the way it turned out. After a light breakfast in rooms, in the pre-dawn hours coaches picked up passengers for the station. Locomotive 3642 had been sent ahead to Ivanhoe, where it was to take coal and water and be prepared for a quick changeover at that point. So it was 3801 alone that climbed the slightly rising grade from Parkes to Goobang Junction with its 617 tonne load. It immediately became apparent to passengers that the countryside had changed, and 3801 was soon loping over the flat countryside at its authorised speed of 115 km/h without effort.

There was a pause at Condobolin, where the Quota Club provided scones with tea or coffee for passengers while the locomotive took water. And once again the locals came from far and near to look at the train. Then it was on again over the plains to Ivanhoe, and so fast was progress that the train reached there an hour early.

The Station Master pleaded that people were coming in from all sides to see the train and asked if it could be held. A decision was made to do so, a following freight was allowed to overtake, and 3642 came to the front of the train for the haul through to Menindee. The journey was a sluggish one, with time lost; in retrospect, it was a shame that the hour gain could not have been retained.

Masters of the plains:
3801 and 3642 at full stretch on the journey from Sydney to Perth.

Right: Locomotive 3642 played host to visitors of all ages at Broken Hill.



AT
Molong, 3801 met another famous train, the Silver City Comet, the first fully air-conditioned train in the British Empire.



Compensation awaited, however. The dinner at the Yacht Club beside the Menindee Lakes, 20 minutes from the station by bus, was so good that the late arrival was soon forgotten. The meal was good, bar service was available, and the night was balmy enough for the travellers to sit under the gum trees watching the full moon rise.

PROBLEMS. But further problems were in store, and it was a very late train indeed that finally got to Broken Hill around 1.30 a.m. on Saturday morning.

Broken Hill was busy on Saturday. In addition to the Bicentennial Steam Train, 3642 was running local trips for the citizens, jazz bands were playing, and there were people about in plenty. Passengers on the BST went on a guided walking tour of Broken Hill's historic buildings, a surface mines and city sights tour and some even ventured underground.

At Broken Hill, 3642 was finally left behind. Now 3801 headed westwards alone, performing magnificently on the long rising grades through the spinifex covered outback. Arrival in Peterborough was late, though.

A railway town for many years, Peterborough is facing dramatic change as technology changes. The town was keen to entertain the train passengers and, because





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Three scenes to make memories from the Bicentennial Steam Tours journey from Sydney to Perth.



of limited commercial accommodation, some passengers stayed in private homes. They were made extremely welcome, and there was a report that one group ended an evening of slides at 2 a.m. the next morning.

From Peterborough north to Orroroo and Eureka, a local preservation group, Steamtown Peterborough Inc, runs tourist trains at certain times of the year. The group provided a chartered special for passengers on the BST, taking them on a journey redolent with history.

The track is still maintained and operated by AN as a wheat-carrying feeder line to the standard gauge network. The 3'6" gauge line was originally part of the Transcontinental route from the eastern states to Perth. Before the introduction of the through route between Adelaide and Port Pirie via Red Hill in 1937, passengers travelled from Adelaide to Terowie on broad gauge, and thence by 3'6" gauge through Peterborough, Orroroo and Quorn to Port Augusta, where the standard gauge line connected to Kalgoorlie.

The carriages used by Steamtown Peterborough started life as standard-gauge sleeping cars on the old Commonwealth Railways between Kalgoorlie and Port Augusta; some are nearly 70 years old. The locomotive used on the BST special train was an import, a West Australian Government Railways Pmn-class Pacific christened Keith Smith in honour of a former Commonwealth Railways Commissioner. It was truly a pot-pourri of history.

At the appointed time of 12.45, the BST was ready to leave Peterborough but a late-running Indian-Pacific delayed departure. On board the BST were some of Peterborough's leading citizens travelling as far as Caltowie, a gesture of thanks from the BST for the hospitality shown to passengers.

DIVERSION. Westwards to Crystal Brook and then north to Port Augusta, with the lady mayor of Port Augusta, Mrs Joy Baluch, joining the train at Mambray Creek. Mrs Baluch had her mother and her granddaughters with her — quite an age distribution!

There was yet another excursion at Port Augusta on Monday 2 May. Coaches collected tourists from their motels for a visit to the Pichi Richi Railway Society headquarters at Quorn. First, an inspection of the workshops, noting the magnificently restored Kitson steam motorcoach, affectionately known as Coffee Pot. One of two such vehicles used on the narrow-gauge lines of the former South Australian Railways, this remarkable unit spent much of its life in the Quorn area. It was rescued by the Preservation Society

The repair of 3801, stranded 4000 km from home, is a story on its own. Even before the stricken locomotive with its train was hauled on to Merredin at 5 a.m., a message had been sent to Sydney, giving details of the trouble. That evening, a replacement big end bearing arrived in Perth by airfreight.

But detailed examination showed the need for much more work.

Drawings of the affected parts were facsimiled to the West and studied by staff of Westrail's Midland workshop and Professor John Glastonbury of Sydney University, Chairman of 3801 Ltd. Tony Gogarty of State Rail, Maintenance Manager Lithgow and travelling with the train, supervised the inspections and carried out many of them himself.

In the end, the offending crank pin was removed. Steel purchased in WA was fabricated into a replacement pin and installed cryogenically. The connecting rod end also had to be reworked, and the side rod bushes needed remetalting and machining.

The trials were completed just in time to allow 3801 to make its way back east — on schedule.

from a plinth in Alice Springs and has been restored to service.

In Quorn, a specially chartered steam train hauled by a former West Australian Government Railways W class 4-8-2 locomotive stood waiting. The load was a light one, and the locomotive made an effortless climb to the Pichi Richi Pass. Then it was down to Woolshed Flat and back into the buses for a quick finish to the morning.

At the platform at Port Augusta stood the extended Bicentennial Steam Train, increased by five sleeping cars, lounge car, dining car, buffet car, crew car, power van, crew relay van, and auxiliary power van — now a total of 26 vehicles for a combined weight of 1314 tonnes.

From this point, 3801 obviously needed assistance, provided in the shape of two of the longest serving GM-class diesel-electric locomotives still operated by Australian National — GM1 and GM2. Both had been recently repainted, and are destined for preservation shortly. GM1 is a real survivor and has covered about seven million kilometres of service on its desert leg. This is the type of locomotive that really revolutionised travel across Australia's Nullarbor.

The AN dining car crew was soon ready to serve lunch — that is, after the first stop for photos at Yorkey's Crossing. The following 44 hours gave passengers an unusual opportunity to see not only the Australian desert at close quarters but also how trains are operated across a desolate stretch. The lengthy safeworking procedures showed just how vital are the improvements being planned by Australian National for this section, and what a major effect they will have on train running for passengers and freight customers.

These days, regular passengers do not have the opportunity of opening the windows on the desert stretches or of getting off to stretch their legs so often.

SANDHILLS. Departure from Tarcoola was delayed in the timetable to allow passengers to see the sandhill country near Ooldea, the southern edge of a broad batch of sandhills that sweep across Australia in an arc from the Bight to Broome. The train also paused at the twin monuments to the joining of the track in 1917 and, on its approach to Cook, was left alone by GM1 and GM2 for photographs. Then 3801 proceeded unassisted to lift the whole 1314 tonne train over the last kilometre into Cook.

Problems with watering at Rawlinna delayed the arrival of the train in Kalgoorlie, but there was still time for a journey between Kalgoorlie and Bonnie Vale for local citizens and groups of school children; all the sitting cars were packed. Passengers meanwhile had the chance to explore the



historic gold mining centres of Kalgoorlie, Boulder, and Coolgardie before meeting in the Kalgoorlie Town Hall for the final dinner of the tour. In a speech, one passenger praised the work the ROA, including the enginemmen, who were present at the meal. The warmth of the applause showed that his sentiments were echoed by his fellows.

And so it was back to the train, with a departure for the final leg at 10.45 p.m. (with assistance provided by a Westrail diesel-electric).

But alas, disaster struck.

Between Kalgoorlie and Koolyanobbing, 3801 developed a problem in the big end, which in turn severely damaged the crank pin. Working in the darkness of the small hours, in intermittent rain and with the occasional long freight train moving past on the main line, the locomotive crews dismantled the running gear on the left hand side of the locomotive and isolated that cylinder.

So it was that 3801, with one side of its motion useless, was hauled in to Merredin, where passengers had breakfast. Here the decision was taken that the whole consist would be hauled in to Perth as one unit.

(The original intention was that 3801 would haul the non-air-conditioned cars only from Merredin in to Perth.)

At Northam, Westrail's Commissioner, Mr Ian McCullough, and the Deputy Commissioner, Mr Bruce Sutherland, joined the train for the final leg through the scenic Avon Valley in to Perth.

And with a feeling for an occasion that Australia's railwaymen so often demonstrate, the Bicentennial Steam Train stopped at the entry to Perth Terminal Station. The Westrail diesel-electric was cut off and run into a siding.

And then 3801, working on one cylinder and with the weight of the train behind it on a slight downgrade, pulled in unaided at a platform thronged with people.

"3801 puffs in under its own steam", said the West Australian headline on Friday 6 May. And so it did.

Faithful companion: locomotive 3642, which accompanied 3801 as far as Broken Hill, gets her share of admiring glances.



BY RAIL WITH STYLE

AUSTRALIA GETS A NEW LUXURY TRAIN

Australia has a new train. Following months of consultation and planning by its owners, Australian Vintage Travel, the Southern Cross Express went into service between Melbourne, Sydney and Canberra.

Two rail systems provide the locomotive crews and passenger guards for the train. V/Line handles the service as far as Albury, where State Rail Authority of New South Wales takes over. The SC Express is the first privately owned train to operate across state boundaries, and there were many administrative and operational problems to be overcome before its entry into service.

The train is unashamedly modelled on "Great Rail Journeys" operating in other parts of the world. The best known of these is the Venice-Simplon Orient Express, and Australian Vintage Travel have copied the attention to detail the VSOE offers its passengers. There is a check-in desk on arrival; the platform is covered by a red carpet flanked with potted palms; and passengers are greeted by Australian Vintage Travel's train staff.

Above: luxurious lounge car on the Southern Cross Express: the wine is included in the ticket price.

Right: a passenger enjoys the comfort of the side-corridor sitting car.



The train is unashamedly modelled on Great Rail Journeys operating in other parts of the world and copies the Orient Express's attention to detail.

Greeting passengers is not new to Australia. It was a feature of the Tasman Limited that ran between Hobart, Launceston and Wynyard in Tasmania until the early 1970s.

The green and cream carriages that make up the Southern Cross Express have an interesting history. They were built by the former South Australian Railways beginning in late 1936, and were immediately used on the new service between Adelaide and Port Pirie via Redhill that opened in 1937. This new direct line shortened the east-west journey between Adelaide and Perth, providing a direct connection with the standard gauge Commonwealth Railways of Port Pirie via Port Augusta to Kalgoorlie. The journey replaced a roundabout one via Terowie, Peterborough and Quorn to Port Augusta.

Of an advanced design for their time, the carriages have welded bodies, a technique later developed by other Australian and international railways. For many years, these carriages and those of a later version with a centre aisle were the mainstay of intrastate passenger trains in South Australia from Adelaide to Port Pirie, Peterborough and Victor Harbour.

Their use declined as self-propelled railcars supplanted locomotive-hauled passenger trains in South Australia, and they were phased out by Australian National. Most were sold to Steam Ranger tours in South Australia, and to Steamage Australia, which refurbished some of them for use on their train The Melbourne Limited. It is this latter group, converted from broad (1600mm) to standard (1435mm) gauge, which are used on the Southern Cross Express.

REFURBISHED. The side-corridor sitting cars still have their original configuration but have been extensively refurbished — new carpeting and upholstery and attention to the polished woodwork. One car has been converted to a lounge/bar, and two have become 48-seater dining cars. All the refurbishment and restoration is of a high standard, and the whole train is decorated in the art deco style. Many of the original features remain.

"A Moving Experience" is the motto of Australian Vintage Travel, which used the former Manly ferry South Steyne in Melbourne as a cruising convention centre and restaurant, and also operates the DC3 aircraft Spirit of Melbourne. And a journey on the Southern Cross Express is certainly a moving experience. Barely is one seated before tea or coffee is offered, followed by breakfast on the early starts from Sydney and Melbourne. Lunch with wine is served in the dining cars. After a nap or a rest in one's compartment it's time for high tea, usually served with champagne. The 12-hour journey between Canberra and Melbourne

on which Network travelled passed very quickly.

And how does the Southern Cross Express compare with the Orient Express (see Network, Vol 22, No 3)? Well, staff on both trains are excellent and the standard of service is high. The SCE carriages were designed as sitting cars and are comfortable. Those on the Orient Express were built as sleeping cars, convertible to sitters, and need cushioning to make passengers comfortable.

The train sets are of different eras, but both have been refurbished to a high degree of elegance. The dining cars on the Southern Cross Express are air-conditioned; the others are being converted. The operators of both trains have seen the need for this because the trains operate through a range of temperatures.

On the Southern Cross Express, the food is thoughtfully presented, but the choice and its quality reflect the manner of preparation and cooking. The dining cars on the SCE use convection ovens. Including wine from a good selection of Australian wines in the price of the journey is a bonus; drinks are expensive on the VSOE.

And where the VSOE makes a feature of its Lalique glass work, the SCE boasts Waterford crystal glassware and Wedgewood china.

SPECTACULAR. The Melbourne to Sydney main line and the branch from Joppa Junction to Canberra are both scenic. Along the twisting route in New South Wales, there is evidence of the regradings and relocations designed to ease operating conditions and improve train performance that have taken place since the line was first built. The spectacular spiral near Bethunga is the leading example of this, but there are substantial deviations in other areas.

Particularly during the spring, when the grass is green, the yellow wattles decorate the hillsides, and the sun shines in a blue sky dotted with fleecy white clouds, the views are most pleasant. Of course, the SCE shares these vistas with the V/Line/State Rail Intercapital Daylight on its journey between Australia's two major cities.

The SCE offers a Melbourne-Sydney journey on Fridays, Sydney to Canberra on Saturday mornings and into the early afternoon, allowing time for sightseeing on arrival, and from Canberra to Melbourne on Sundays. All the extras are available for a memorable journey: luxury accommodation in both Sydney and Canberra is available on a package basis, stopovers can be made in either city and there are limousine transfers.

The fares are not low and there are no concessions available for pensioners as with ordinary rail travel. But one is not paying just to travel, one is paying for a moving experience. And certainly the passengers on Network's journey seemed to enjoy it.

Good luck to the Southern Cross Express.



Finalising the contract for the AN/Telecom optical fibre cable are (from left) Russell King, AN's acting general manager, Dr Don Williams, AN chairman, Ray Liggett, Telecom's executive general manager, and the general manager of Telecom's corporate customer division.

FIBRE OPTIC LINK

AN SIGNS LANDMARK AGREEMENT

Australian National and Telecom Australia have signed an agreement to develop an optical fibre communications link across the Nullarbor Plain that ushers in a new era in train management which will boost AN's commercial competitiveness.

Dr Don Williams, chairman of AN, and Mr Ray Liggett, Telecom's executive general manager, signed the contract worth \$20m. The system is expected to be working within 18 months.

Telecom's 1800 km of cable will replace the open wire telephone

system that dates back to 1917 when the railway was built. AN will share the new system with Telecom.

Optical fibre communications will eliminate the need for trains to stop for train control instructions and allow better deployment of maintenance and operations staff.

With fewer stops and remotely operated siding points switches, trains can be better scheduled and run, benefits that can be passed on to customers.

Train controllers will be able to contact locomotive crews and maintenance gangs via local base radio stations linked to the cable at

each crossing loop along the line, the system providing continuous UHF analogue and digital radio coverage.

The new system will greatly improve voice communications, at present hampered by the poor quality and unreliability of the open-wire pole line.

Dr Williams said that as part of AN's technological development, the optical fibre link could be expanded to include computerised advanced train control systems and use field terminals to detect rolling stock faults on moving trains.

CHRONICLE OF A FORGOTTEN LINE **NEVER-ENDING STORY**

**The Never-
Never Line**
By J. Y. Harvey

Hyland House,
Melbourne, 1987,
\$45.

This book has been practically a lifetime's work for Jim Harvey and the result reflects the time and effort he has put into it.

There have been few railways in Australia with such a chequered history as the North Australia Railway. It spans the period of enthusiasm for a transcontinental railway to rival that of the United States, to the many years of "peaceful semi-autonomy", followed by the difficult times of World War Two and the more recent Frances Creek iron ore traffic.

The North Australia Railway finally stopped at Birdum, 511km south of Darwin, having been built in three stages by two owners over 45 years.

Jim Harvey's *The Never-Never Line* tells the story of this railway. It was originally conceived of as part of a great north-south transcontinental railway intended to connect Adelaide to Darwin and the rest of the world, revolutionising communications in much the same way as the overland telegraph had.

The author traces the early history of the line, the stages of its construction (much of it by Chinese labour), its early period of operation as the Palmerston Division of the South Australian Railways, and the sub-

sequent transfer of control to Commonwealth ownership.

Harvey portrays vividly the difficulties encountered during World War Two as the line and equipment, all run down, struggled to handle record tonnages with borrowed staff and equipment and plagued by Japanese air raids and the problems of military attempts at control.

The *Never-Never Line* not only tells the story of the North Australia Railway but also chronicles the various attempts over more than a century to complete the north-south transcontinental railway. These attempts continue today.

The North Australia Railway, as an isolated line far removed from any of the major centres of population, has received little attention from historians, railway enthusiasts (or railway managements, for that matter), and Jim Harvey's book fills a major gap in Australian history.

It is an excellent balance of narrative and operations and technical detail and is reliable, readable and informative. As the only authoritative work on the North Australia Railway, it is highly recommended to historians, railway enthusiasts and all those interested in Australian history.

CELEBRATING 125 YEARS **NZ ON THE RAILS**

**Rail — The
Great New
Zealand
Adventure**
By Roy Sinclair

Grantham House,
Wellington, \$45.95.

This book, published to commemorate 125 years of railways in New Zealand, is most attractive. The dust jacket sets a high standard of photographic reproduction, maintained through the book. Colour rendition is sound and definition is very good, given the age of some of the contributed photographs.

New Zealand has been fortunate in

its railway photography, which has developed over many years, perhaps initially through the *Auckland Weekly Illustrated News*. Roy Sinclair's latest work continues the tradition.

The book does not seek to spell out the history of rail development in New Zealand sleeper by sleeper or rivet by rivet. Rather, it gives a broad outline of the way essential transportation was provided throughout the two islands,

REVIEWS

and comments on infrastructure, motive power and rollingstock development.

Sinclair describes rail journeys past and present over some of New Zealand's better-known routes. For those who enjoy rail travel, New Zealand has a lot to offer: rolling plains stretching to distant, often

snow-capped, mountains, rails sneaking along rugged coastlines with the sea very close, even "a railway that goes to sea". The book's photographs complement the travellers' tales.

The whole story is told in pleasing style and makes easy reading. Look for it at your bookseller at around \$45.

Railway Directory and Yearbook 1988

Edited by
Chris Bushell

Railway Gazette
Internation,
London 1988.

THE WHOLE WORLD OF RAILWAYS

For almost a century, Railway Gazette has been publishing the annual Railway Directory and Yearbook, and the 1988 edition maintains the formidable tradition established by earlier volumes of listing the world's railway systems with considerable accuracy.

This year, 76 railway maps are provided, and the special Metro and Light Rail Section has been revamped, reflecting the growing importance of metropolitan transport and the moves being made all over the world toward more economical operations.

For the Australian Railway Systems section, the coverage is comprehensive for both government and private railways. At the yearbook deadline the personnel list appears accurate.

The manufacturing section of the yearbook covers the major manufacturers of rolling stock, components, diesel engines, signalling and other equipment, but space precludes detailed information on products.

There is even a section devoted to Railway Museums — and the Australian listing has no less than eight venues for railway enthusiasts.

POWER PARADE & LINE OF PROGRESS IDEAL GIFTS:

POWER PARADE

Power Parade shows the development of steam and diesel-electric locomotives of the Victorian Railways and V/Line. Power Parade has some rare historical footage including Polly, the first locomotive built at Newport Workshops, in action as a steam crane.

Also included is action of a narrow gauge Garratt in the Otway Ranges, S Class steam locomotives, both in their original and streamlined forms, R752 hauling a wheat train and footage of X, A2, D4, C, Old R and E Class locomotives.

As an added bonus, there is a photograph of every class of locomotive to run in Victoria included.

But Power Parade is not just about nostalgia. Power Parade has present day action including the powerful sight of two C Class diesel-electric locomotives hauling more than 1,000 tonnes of freight up Ingliston Bank.

V/Line's newest locomotives, the N and G Classes, are featured in action as is the final run of the L Class mainline electric locomotives.

Power Parade is hosted by Gerald Dee, who spent many years on the footplate and is currently V/Line's Fuel Conservation Officer, and is narrated by well-known railway historian Bruce McLean.

LINE OF PROGRESS

A fascinating compilation of footage from the past and the present which highlights two historic events for passenger rolling stock in Victoria. Two separate and contrasting films - made nearly half a century apart - that take you from the days of Orient Express-style opulence and liveried conductors, through to the contemporary luxury of air-conditioned Country passenger trains.

THE SPIRIT OF PROGRESS - AUSTRALIA'S WONDER TRAIN. This marvellous journey into the days of steam was created in 1937 to celebrate the construction of the original Spirit of Progress. The film has been restored from documentary material in the railway archives. Picture and sound enhancement have made it possible to present this film for the first time to a modern audience.

The Spirit of Progress - Australia's Wonder Train is a detailed account of the construction, unveiling and inaugural trip of a train that, in its day, was a hallmark of speed, quality and luxury.

THE RETURN OF THE COUNTRY TRAINER.

The second film in this package is a perfect counterpoint to the Spirit of Progress - Australia's Wonder Train. The stage is set in the early 1980's - almost fifty years later. The film focuses on the massive rolling stock upgrading task that was begun in 1982/83.

A new generation of artisans and designers undertake the construction. An impressive contrast to the crafts of the 1930's carriagebuilder, The Return of the Country Trainer gives a colourful insight into modern railway engineering techniques and the technical advances of the past decades.



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WEIGHTLIFTS TAKE THE GUESSING OUT OF WEIGHING

The owners and managers of freight yards and cargo companies have always known that very few people can judge weights accurately.

When freight is charged by weight not volume, the chances are that some people will understate and others will overstate the weight of what they are sending. And in a busy despatch office, most customers and freight handlers won't query these guesstimates.

Even with today's small profit margins, few shippers weigh everything that comes in; either they don't have the right equipment or it is inconvenient or time-consuming to use. For many in the transport industry the aim was to get the job done and the precise weight of consigned goods was just a technicality.

But a kilo "here or there" does matter when the revenue loss that occurs if "near enough is good enough" several times a day, every day of the year, is calculated.

Victoria's railway system, V/Line, is among those operators paying closer attention to what things weigh. It believes that by not always checking in the past, it may have lost revenue there for the asking.

It has also sometimes incurred the displeasure of its sub-contractors, who have spot-checked goods and found inconsistencies.

Among V/Line's new procedures is the use of weight gauges fitted to forklifts at its Melbourne Freight Terminal.

V/Line is one of Victoria's largest road hauliers, running a fleet of 42 trailers and 12 prime movers.

The forklifts, supplied on long-term contracts by Wreckair Hire, are fitted with weighing devices and a digital readout mounted on the

operator's control panel. They were first introduced to help freight crews make the switch from loading 57 tonne rail cars to 22 and 23 tonne capacity semi-trailers.

According to V/Line's Acting Operations Manager at the Melbourne Freight Terminal, Denis Grose, the forks are paying their way handsomely, not just in picking up what would have been lost revenue, but also in reducing the number of complaints from sub-contractors.

"We're using the forks for spot checking the weight of various consignments, and it is amazing how much discrepancy there can be either way," Grose says.

Wreckair's Melbourne-based materials handling specialist, Peter Marsh, says the weight gauges are creating interest throughout the transport industry.

"It seems that many profit-conscious operators are coming out of the woodwork, admitting their

past sins and are now keen to tighten up their procedures," says Marsh.

"The other side of the coin, of course, is the reaction of the forklift drivers, who tend to resist any changes that are inconvenient or which interfere with traditional operating patterns.

"Because the readouts can be seen by the driver by merely glancing down at the dashboard, the units have been accepted without a murmur," he says.

"There's another benefit, too.

"Because the readout is easy to see, operators tend not to overload their vehicles. This improves safety and reduces strain on the fork trucks."

Although no accurate assessment of money lost through sloppy weighing procedures is possible, Marsh believes that the losses to Australian transport could run to millions of dollars.

V/Line forklift drivers can check freight weights at a glance, saving revenue and reducing complaints.



NEW PRODUCTS & PROCESSES

**Microprocessor accuracy:
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electric locomotive.**

LOW-SPEED CONTROLLER EASES STRAIN OF LOADING

Loading long bulk transport trains with loads such as coal, ore and wheat used to be a slow, tedious task that produced high levels of stress and fatigue in locomotive drivers while causing wear in locomotive switches and associated controls.

Now Clyde Engineering Motive Power Division has made the task easier with its Speedmaster automatic low-speed controller for diesel electric locomotives.



Wholly designed and manufactured in Australia, Speedmaster is a microprocessor-based speed controller that accurately maintains train speeds as required by the driver between 0.1 and 9.9 km/h, regardless of changes in load, grade or track conditions.

This produces efficient, even and

accurate loading of wagons, minimises spillage of the goods, and eliminates the risk of physical strain often brought about by working long shifts on very large trains.

For more information contact Clyde Engineering, Factory Road, Granville, NSW. Phone: (02) 637 8288.



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WINDOW SEAT

NEW TRANSPORT MINISTER

New South Wales has a new Minister for Transport, Mr Bruce George Baird.

Mr Baird, 46, married with three children, is the Liberal Member for Northcott on Sydney's North Shore. A member of Parliament since 1984, he was Shadow Minister for Transport in the previous Parliament.

Mr Baird has a Bachelor of Arts degree from the University of Sydney (1963) and an MBA from the University of Melbourne (1972). He was Assistant Trade Commissioner in Bonn, West Germany, from 1973-76, and for the next three years was Australian Trade Commissioner in New York. Until entering Parliament, he was government affairs manager with Esso Australia.

While in Opposition, Mr Baird held several important positions in the

Shadow Ministry. Following his appointment as Shadow Minister for Finance in April 1984, he was also made Shadow Minister for Aboriginal Affairs in December 1984 and Shadow Minister for Industrial Relations and Employment in February 1986.

In May 1986, a shadow cabinet reshuffle gave Mr Baird the portfolio of Transport and Finance.

Mr Baird's first public function as Minister for Transport was to launch the State Rail Expo Express, a new luxury train that will carry visitors to Brisbane's World Expo 88.

A standard approach to marginal costing for international freight is now being applied by 11 European railways, bringing to a successful conclusion the project sponsored by the Enlarged Group of European Community Railways.

The 11 railways applying the agreement are BR, CFF, CFL, CIE, DB, DSB, FS, NS, RENFE, SNCB, and SNCF, while the other three, CH, CP, and OBB, are looking at introducing the same costing criteria.



SPOTLIGHT ON PASSENGERS

Designing passenger trains and light rail vehicles will be discussed at an international conference organised by the Institution of Mechanical Engineers (IMEchE), one of Britain's leading engineering institutions.

Entitled "Rail Vehicles for Passengers", the conference will be held between 22-24 November 1988 at the Watershed Conference Centre in Bristol, England. It will feature papers from all over the world, with subjects including: passenger experience; safety; materials selection; providing for the disabled; visual design, passenger systems (such as public address systems, entertainment, and

security); and physical environment (including noise levels, heating and ventilation requirements, and seating).

The Watershed Conference Centre, created from two 19th century warehouses, is easily reached by rail or road from London and other parts of Britain.

For more information on the conference, co-sponsored by the Institution of Electrical Engineers and the Chartered Society of Designers in Britain and the Institution of Engineers in Australia, please contact: Ms Monica Lee, Conference Department (C381), International Information Centre, IMechE/19, PO Box 6, Nottingham, NG11 6PE, England.

TRACK RECORD

A Coffs Harbour team of railway workers hammered and slogged their way into the world record books when they laid seven metres of rail track in just 12 minutes and seven seconds.

The north coast team demolished competition from all over NSW and Queensland to storm home the winners of the State Rail Trackfast Tracklaying Competition at the Royal Easter Show.

The competition

attracted keen spectator interest over the four days of heats and semi-finals. Teams had to build the seven metre track, join it to an existing track, and push a loaded trolley to the finishing line, a task requiring experience and plenty of muscle.

State Rail will enter the Coffs Harbour team result for the Guinness Book of World Records. Placegetters in the competition were Wagga (second), Metropolitan A (third) and Dubbo (fourth).

QR APPOINTMENT

Mr Kevin Neil has been appointed as Assistant Commissioner (Commercial) of Queensland Railways, following the retirement of Mr John Linfoot.

Mr Neil, in his role of Divisional General Manager based at Rockhampton, supervised the growth of coal train traffic in Central Queensland brought about

by the huge main line electrification project. In all, 61.2 million tonnes of coal were hauled during the last financial year, the bulk of it in Central Queensland, with overall freight sales accounting for 93 per cent of Queensland Railways' revenue.

Mr Neil, 58, began work with Queensland Railways in 1945 as a junior clerk. He is a member of the Chartered Institute of Transport.

AND NOW FOR THE VIEWLINER

A mtrak's prototype Viewliner sleeping car, which it calls the passenger car of the future, is now in use on the line's AutoTrain between Sanford, Florida, and Lorton, Virginia.

All Viewliner rooms have private toilets and

sinks, separate windows for the upper and lower berth, hot and cold water, aisle-side windows, wardrobes, and luggage storage. The designers have combined the best features of Amtrak's Superliner sleeping cars with the "wish lists" of both passengers and Amtrak employees.

Before a production order is placed, two Viewliner prototypes will be used by passengers on regular service. The prototype sleepers have different components, fabrics, and floor coverings to find out which are easiest to maintain and most durable.

Viewliner sleepers will be tested on AutoTrain for several months before being shifted to other eastern Amtrak routes for a year for further testing.

AutoTrain is a daily non-stop train taking passengers and their cars 900 miles between Florida and Virginia.

Locomotive B67's last stop: passerby taken aback at the resting place of a V/Line locomotive in Prahran, Melbourne.



GOING LOCO

When V/Line advertised good quality locomotives for sale, prospective buyers ranged from Melbourne breweries to a small country on the west coast of Africa. Project Manager Frank Uhe of the Workshops Division received letters from countries as far away as Ethiopia, Jordan, Morocco, and Togo, a country east of Ghana on the west coast of Africa. The Togo inquiry came from a phosphate company.

Other inquiries were received from Cuba, Bangladesh, China, and Malaysia about the 15 flat-top T Class locomotives V/Line offered for sale in May 1986.

All but one of the countries operate narrow gauge railways, the exception being Bangladesh, which operates a 1676mm railway. The locomotives were suitable for conversion from broad gauge.

Although none of the overseas inquiries came to anything, Frank did sell all the flat-tops.

"The Australian Railways Historical Society bought one and so did tourist railways at Healesville, Daylesford and Maldon," he says.

"Two have been leased to Australian Paper Mills at Maryvale in Gippsland, and Bob White Electrix in Geelong bought four."

These four locomotives are being used to supply direct

current power to drive a massive balancing machine.

Frank Uhe has also been involved with the sale of L, W, B, E and F Class locomotives made surplus through changes to V/Line operations, such as the review into shunting, and withdrawal of electrified services to the Latrobe Valley in favour of the Met.

"Without a doubt the most unusual sale was the nose of B67, which was sold to the Brewery Tavern, Prahran," says Frank.

They wanted the nose of the locomotive as a landmark for The Station Motel, which is across the road from Prahran Station.

"Another of the class, B68, is going on display at the front of Bendigo Workshops in place of D3 619, which will be restored to working order," says Frank.

"Then there is the extremely keen railway enthusiast who has bought his very own locomotive, B72."

In addition to the locomotives sold, several have allocated to railway groups for preservation. Three L Class mainline locomotives and two E Class shunting locos are being preserved by ElecRail.

Frank Uhe has also sold 46 locomotives to Steel and Alloy. They are being dismantled at Spotswood Workshops.



Record breaking Coal Train by SRA using 4 Clyde 81 Class Diesel Electric Locomotives, pulling 84 wagons - gross 8,400 tonnes.

In February 1987, Clyde Engineering will supply its 2 millionth horsepower to Australian rail roads.

Since 1951 when Clyde delivered Australia's first Diesel, we have produced 1,200 locomotives.

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Technological advances in recent times include microprocessor controlled locos and fuel savings in operation of 30 - 35% over units supplied 20 years ago.

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State Rail pampers passengers all the way from Sydney to Brisbane aboard the Expo Express.

CHAMPAGNE SERVICE

State Rail has provided a luxurious means of travel from Sydney for visitors to Brisbane's Expo 88. The Expo Express, launched on 6 May, welcomes passengers with champagne and savouries and the pampering continues all the way to the Brisbane Transit

Centre.

The newly refurbished lounge car, with pastel leather armchairs, pale carpets and walls, beautiful glass panels and a bar, provides a cruise-ship atmosphere on the 18-hour trip to Brisbane.

Accommodation is in en-suite sleepers or aircraft-style reclining seats and

gourmet meals are included in the cost of travel on the Expo Express. The train also carries passengers' cars.

Expo Express runs twice weekly between Sydney and Brisbane, leaving Sydney at 10.30 pm on Fridays and Mondays, arriving in Brisbane at 3.15 pm the next day. Brisbane

departures are at 6.50 pm on Tuesdays and Saturdays.

All meals, entertainment, special Expo information packs and travel are included in the return fares: sleeper \$394, seat \$275 for adults and \$287 or \$178 for pensioners and children.



WINDOW SEAT

THE 30
MEN WHO
MOVED A

MOUNTAIN

A team of 30 railway workers moved a mountain to reopen vital rail services north of Grafton in New South Wales during recent flooding.

Working in torrential rain, knee-deep in mud, the team diverted 130 metres of track in just 32 hours. A huge landslide more than 30 metres wide had caused the line to fall three

metres, isolating the north coast line beyond Grafton.

After a survey of the rugged terrain above the swollen Clarence River showed the track could not be restored, a decision was made to build a new line. The daunting task involved cutting the hill seven metres above the old rail line down to the sandstone bedrock for the 130 metre

length. A huge chunk of the mountain had to be moved.

At one stage, the 16-hour shifts were interrupted when six State Rail workmen were called away to an even more pressing emergency — rising floodwaters were threatening their homes. But all six were back on the job at 6 am the next day to begin laying the new track.

In spite of the terrible weather and appalling working conditions, the task was finished 28 hours ahead of schedule.

It was a triumphant moment when the first train passed over the new section of the vital coastal corridor.

The new track will be a permanent part of the northern line, and a monument to the tenacity and skill of State Rail workers.



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MOTORAIL SERVICE FOR THE INDIAN PACIFIC

State Rail has expanded its popular Motorail services. From Thursday 2 June, passengers have been able to pay \$150 to take their cars with them to the city of churches.

The Adelaide Motorail will be available on the Indian Pacific to Adelaide, leaving Sydney on Thursdays and Sundays, returning Wednesdays and Saturdays. Cars must travel the full journey. Delivery and collection points are at Sydney's Central Terminal and the Adelaide Rail Passenger Terminal.

WINDOW SEAT

Locomotive 3801 and companion 3642 take a cutting in their stride on a Bicentennial Steam Tours trip.



STILL TIME TO CATCH THE GREAT STEAM RIDE

There is still time to ride the Bicentennial Steam Train on its journeys between Sydney and Brisbane, and Sydney and Melbourne. Bookings are available on each of the four segments.

Dates and prices, which include overnight accommodation on a twin-share basis and meals, are:

- Sydney — Brisbane,
departs 16 September: \$340 per person
- Brisbane — Sydney,

departs 1 October: \$340 per person

- Sydney — Melbourne,
departs 15 October: \$240 per person

- Melbourne — Sydney,
departs 29 October: \$240 per person

Brochures are available from Rail Travel Centres in capital cities, flyers at major railway stations, or write to Bicentennial Steam Tours, PO Box 503, Collins Street Post Office, Melbourne 3001, or telephone (03) 608 0811 for a brochure.

A Queensland Railways fettling gang is among the attractions at an exhibition of paintings and limited edition prints opened by Transport Minister Ivan Gibbs at the Queensland Art Gallery.

The fettling gang is the subject of one of six paintings commissioned by Queensland Railways as part of Expo and Bicentennial celebrations. Three Queensland artists, Peter Lawson, Alan Purnell, and Paul Reilly, painted subjects ranging from an "Expo Sunset" to a two-kilometre long coal train in the Mackay District and Brisbane's Roma Street Transit Centre.

A limited edition of 500 prints has been signed and numbered by the artists. They are for sale at \$35 each (\$175 for the set) to visitors to the railway section of the VIP pavilion at Expo and through Queensland Railways' Marketing Division, GPO Box 1429, Brisbane, Q. 4001. Post and packaging is \$3.

Below: The Fettlers, by Paul Reilly, a study of Number 2 Fettling Gang, Beaudesert, Queensland.



The Long Train, by Peter Robert Lawson, pictures a two-kilometre-long electric coal train in Central Queensland.

**WINDOW
SEAT**





Kuranda Tourists, by Peter Robert Lawson, a view of the Kuranda Tourist Train at Stony Creek Falls in North Queensland.

BRITAIN'S SUPERLOCO ARRIVES ON TIME

The high-speed, hi-tech superloco that will take Britain's InterCity rail services into the 21st century has arrived — on time.

The first of a fleet of 31 of the 225 km/h class 91 electric locos has rolled off the assembly line at Crewe in the northern Midlands. Over the next few months, nine more will be delivered. The aim is to use the first 10 locos to clock up 1.6 million kilometres of proving before introducing the other 21.

The class 91s — known as Electras — will work push-pull express trains on the East Coast main line now being electrified between London King's Cross and Leeds and Edinburgh.

The 91s have enough power to haul 15 sleeping cars over some of the country's most testing gradients. But their main task will be to clip 30 minutes off the journey between London and Edinburgh.

The Electras can reach 225 km/h but will be kept under 201 km/h. Track and signalling improvements introduced will enable the trains to make the 30-minute time saving despite the speed limit.

InterCity project manager Mr Dave Rollin says the 91s will be running at speeds well over 201 km/h during tests without passengers on the East Coast main line.

The first 91 took just 12 weeks to build. GEC won the contract to build the Electras 18 months ago, with British Rail Engineering Ltd (BREL) designing the bodywork and bogies, and assembling the locomotives as sub-contractors. (LPS)

WINDOW SEAT

INTERSTATE FARES UP

Fares on some interstate trains have increased from 1 July 1988, according to Mr M.C.G. Schrader, Executive Director of the Railways of Australia Committee.

The increases, of around 5 per cent, apply to fares, meal charges and sleeping berths. For example, First Class Sleepers will be \$107 between Melbourne and Adelaide (up from \$101), \$137 between Melbourne and Sydney (\$129), and \$140 between Sydney and Brisbane (\$132). Economy sitting charges will be Melbourne-Adelaide \$50

(\$47), Sydney-Melbourne \$71 (\$67), and Sydney-Brisbane \$73 (\$69). Advance purchase (CAPER) fares, which offer discounts of up to 30 per cent, increase similarly.

Mr Schrader said the sitting car fare between Adelaide and Perth was still only \$130 (\$125) and offered great value in interstate travel. The coach cars used were spacious and had showers and women's restrooms.

MotoRail (taking your car on the same train) charges between Sydney and Melbourne and Sydney and Brisbane would increase to

\$95 (\$90), Mr Schrader said. MotoRail fares were unchanged between Melbourne and Adelaide, or West of Adelaide. A new MotoRail service was introduced between Sydney and Adelaide from 2 June, and leaves Sydney every Sunday and Thursday. From Adelaide the service began on Saturday 4 June and left Adelaide for Sydney every Wednesday and Saturday.

On MotoRail services cars could now be carried on services on either side of the passenger's train if the preferred service was fully booked.

V/LINE'S EXPO 88 PACKAGES

Victoria's V/Line has put together four holiday packages for World Expo 88. There is a 16-day tour for bowlers, who can go north at leisure, stay at the Coolangatta Motel (with pool), bowl indoors and outdoors and go day-tripping to Stradbroke Island, the Lamington Plateau, Brisbane and the Brisbane River cruise, Expo, plus the sanctuaries and Seaworld, the casino, and a sugar mill. First class return train travel, accommodation and meals cost \$1243 (full fare) or \$1195 for pensioners.

Of the other three 10-day tours, two involve return rail travel from Melbourne to Brisbane. The third, the Gold Coast Magic tour, is by luxury air-conditioned coach to Brisbane via the coast (Princes Highway) and back to Melbourne inland through Armidale, Dubbo and Wagga.

All three are crowded with sightseeing, scenic drives and cruises and include plenty of time for Expo and seeing Brisbane and the Gold Coast.

These 10-day tours are priced from \$710 to \$773 full fare, with discounts for pensioners. Expo tickets are not included in the tour price. For further details on holiday dates, itineraries and prices, phone V/Line Tours on (03) 620 0771.

SWEDEN BOOSTS RAILWAYS

New legislation tabled in the Swedish Parliament attempts to reduce transport-related pollution by providing for heavier road taxation and stricter speed limits.

Swedish Railways (SJ) is to receive investment funds of 10 billion Swedish crowns (\$2.197 billion) over 10 years. Intermodal tonnage is expected to triple. SJ is also being restructured into two sections, both public: one for infrastructure, one for operations. Subsidiaries not contributing directly towards reinforcing rail's position are to be hived off, and regional passenger transport services will be transferred to local authorities, which will then have to decide how to run them.

The clip



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BRISBANE
AND CAIRNS

GOING NORTH

My journey began at the new \$75 million Brisbane Transit Centre at 8.15am on a Sunday. The tropical delights of Australia's North Queensland, including the world-famous Kuranda Tourist Train, beckoned.

North Queensland abounds with attractions: game fishing on the Great Barrier Reef, the world's largest coral formation; spotting crocodiles on the beautiful Daintree River; savouring the beauty of the northern coastal resorts close to the tourist hub of Cairns.

Cairns, which we would reach on late Monday afternoon, is almost 1700km to the north of Queensland's sub-tropical capital, Brisbane, which has a population of more than one million.

The state's new luxury train, the Queenslander, sets new standards in comfort and style for travel along the Sunshine route between Brisbane and Cairns.

Shortly after departure I was enjoying a drink in the lounge car, which quickly becomes the social hub of this air-conditioned upmarket train. It is partly modelled on the famous Blue Train in South Africa and features Queensland timber panelling, plush furniture, brass fittings, and tropical plants. As well as having a drink, first class passengers can enjoy a video, read newspapers or drink complimentary tea or coffee.

The lounge car is open from 10 am to 10 pm on the first day and from 10 am to 5.30 pm (shortly before arrival in Cairns) on the last leg of the journey.

Little more than an hour out of Brisbane, the extraordinary shapes of the famous Glasshouse Mountains appear, dramatic formations pushed up and out of shape by some mighty volcanic surge aeons ago. A little later, the lush green sugar cane fields come into view around Nambour on the Sunshine Coast, about 100km north of





Brisbane. Sugar cane is a major crop along the Queensland coast.

DINING. Further north, first class passengers enjoy the first of the four superb meals they will eat in the comfortable dining car. Choices include Barrier Reef seafood, prime Central Queensland beef, and tropical fruits. Drinks are available during lunch and dinner, and the wine list includes award-winning wines from the Granite Belt in South Queensland. Glass partitions between tables give added privacy.

The Queenslander's food has drawn praise from travellers from all over the world and rivals that of top eating establishments.

For first class passengers, meals are included. Economy passengers have a separate a la carte menu offering three-course meals that are great value.

First class passengers can choose roomette or twinette sleeping compartments. They have comfortable

beds, reading lights, wash basins, electric power points, towels, wardrobes, and full-length mirrors. All sleeping and sitting cars have showers.

The Queenslander crosses the Tropic of Capricorn near Rockhampton early in the evening of the first day of travel. The 30-minute stop in this city, the capital of Australia's largest beef-producing area, gives passengers time for a stroll in the night air and a chance to buy newspapers or magazines. Shortly afterwards the train proceeds down the middle of Denison Street, one of Rockhampton's main thoroughfares.

Mackay, 946km north of Brisbane, is the next major city. It is the sugar capital of Queensland and has the largest bulk sugar terminal in the world. The city is close to beautiful Brampton Island, a popular resort on the Great Barrier Reef. Proserpine, the gateway to the Whitsunday Islands, is about 120km north.

**Northbound
Queenslander ready
to leave the Brisbane
Transit Centre on the
1700km journey from
Brisbane to Cairns.**



The Brisbane Transit Centre looms up behind the Queenslander as it prepares to leave for Cairns.

Left: Plush bar of the Queenslander's lounge car. Passengers can also watch videos.

Right: The Queenslander near the Glasshouse Mountains on its journey north to Cairns.



The last leg has the full range of Queensland scenery: open landscape, dense tropical rainforest, coastal townships, and mountain ranges.

Townsville is the next major centre of population. Magnetic Island, a relaxing resort and residential area, is close by.

SCENERY. I found the last leg, Townsville to Cairns, to be the most picturesque travelled by the Queenslander. It has the full range of Queensland scenery: open landscape, dense tropical rainforest, coastal townships and mountain ranges, and includes Tully, Australia's wettest town with an average annual rainfall of 4267mm.

The popularity of the Queenslander has vindicated Queensland Railways' decision to introduce this luxurious tourist train in April 1986. The train normally has four first-class sleeping cars, a lounge car, dining car, club car, and two economy-class sitting cars. It takes 70 first-class travellers and 96 economy-class passengers. Power car, baggage car, mail van and staff sleeping car and "six-pack" car carriers complete the train.

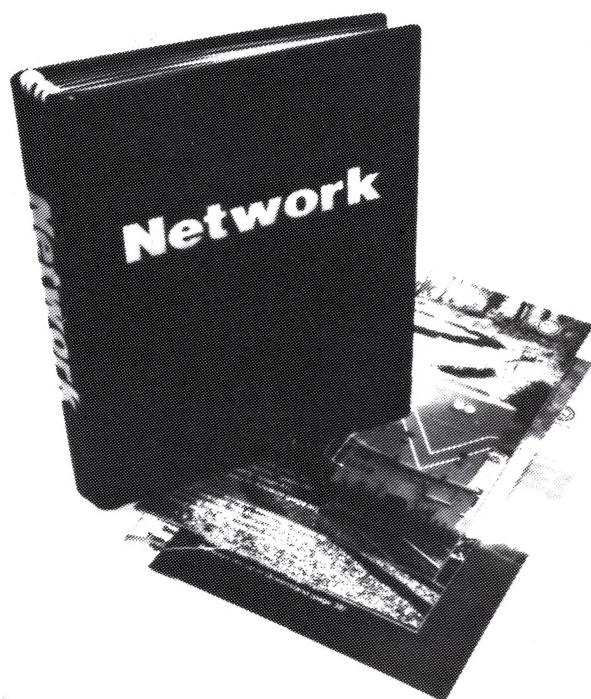
The Queenslander leaves Cairns for Brisbane on Tuesday morning, arriving in Brisbane early Wednesday evening.

Cairns, a popular base for tourists, is a delightful terminus for the Queenslander. The scenic district now boasts international standard hotels and resorts.

A highlight of a holiday in north Queensland is the 34km journey on the Cairns-Kuranda Tourist Train, which travels through some of Australia's most beautiful rainforest. The train's steep and winding ascent to the Atherton Tableland takes the traveller through 15 tunnels camouflaged by a dense blanket of greenery.

Although overseas visitors can now fly home from Cairns International Airport, an attractive option is to return south to Brisbane by daylight rail tour, which includes bus excursions and overnight hotel accommodation. These tours are available from April to October.

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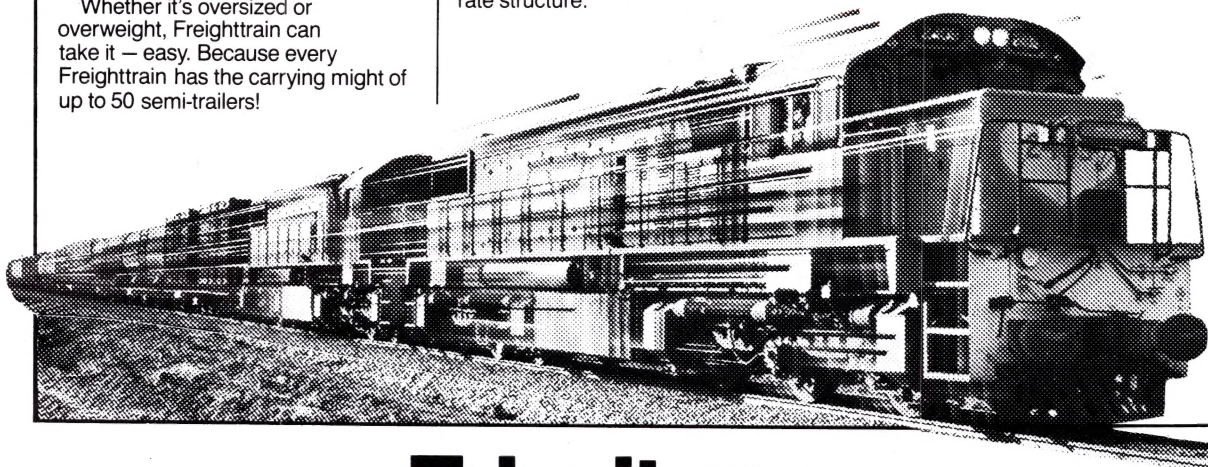
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